MITIGATED NEGATIVE DECLARATION

PROJECT: **PUBLIC PARK IMPROVEMENTS PROJECT**

LEAD AGENCY: California Department of Parks and Recreation

AVAILABILITY OF DOCUMENTS: The Initial Study for this Mitigated Negative Declaration is available for review at:

- Northern Service Center
  California Department of Parks & Recreation
  One Capitol Mall - Suite 410
  Sacramento, California 95814

- California Department of Parks & Recreation
  Diablo Vista District
  363 Third Street West
  Sonoma, California 95476

- California Department of Parks & Recreation
  Bay Sector Office
  96 Mitchell Canyon Road
  Clayton, California 94517

- Berkeley Public Library
  1125 University Avenue
  Berkeley, California 94702

- Richmond Public Library Main Branch
  325 Civic Center Plaza
  Richmond, California 94804

- Albany Library
  1247 Marin Ave.
  Albany, California 94706

- Oakland Public Library
  Golden Gate Branch
  5606 San Pablo Avenue
  Oakland, California 94608

- California Department of Parks & Recreation website
  http://www.parks.ca.gov/default.asp?page_id=981

PROJECT DESCRIPTION:

The Department of Parks and Recreation (California State Parks) proposes to make improvements to the Berkeley Meadow and Brickyard at Eastshore State Park. The following is a summary of the proposed work:

Berkeley Meadow Area

- Conduct hazardous material study and conduct indicated remediation.
- Remove debris.
- Enhance seasonal wetlands. Remove selected nonnative plants, revegetate with native plants, place fill in upland areas to improve drainage and to support trail system, and install fencing along perimeter and interior trails.
- Enhance the upland habitat.
    - ♦ Conduct topographical and special status species surveys; identify native raptor nesting sites and other significant existing native wildlife use of the upland areas. Use results of surveys to refine draft vegetation management plan. Develop grading plan, based on the need to import fill into the upland area.
    - ♦ Carry out phased removal of mature exotic trees, such as black acacia, and immature nonnative trees, such as eucalyptus saplings.
    - ♦ Replant upland areas with locally native species.
- Establish a fenced trail system, 12 feet in width and approximately 7,500 feet in total length, and compliant with Americans with Disabilities Act standards. Designate a large, fenced, central area as "authorized access only" to protect sensitive habitat and restoration areas.
- Install interpretive panels, regulatory signage, and entry monument.

Brickyard Area

- Conduct a hazardous materials survey.
- Conduct a facilities concept study, including a special status species survey, to determine appropriate facilities and use for the Brickyard.
- Prepare a development and facilities management plan for the introduction of recreation and visitor facilities to the Brickyard area. Operations to be considered should include park operations/visitor center; concessions such as a café/restaurant/deli and recreational equipment; restrooms; landscaping and recreational space, such as turf areas, picnic facilities, and seating; trails, such as a waterfront promenade along the west side of the Brickyard Spit to a vista point, an internal trail system for the area with the appropriate connections to external trails; a bird blind near the outlet of Strawberry Creek; parking for up to 200 cars; interpretive panels and displays; and entry monument signs.
- Install a modular office building, with utilities and parking. Structure will not exceed 24 feet wide by 60 feet long.
- Install benches, tables, and entry monument.

A copy of the Initial Study is attached. Questions or comments regarding this Initial Study/Mitigated Negative Declaration should be submitted in writing to:

Gail Sevrens – Environmental Coordinator
California Department of Parks & Recreation
Northern Service Center
One Capitol Mall - Suite 500
Sacramento, California 95814

Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (DPR) has independently reviewed and analyzed the Initial Study and Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of DPR. DPR, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Negative Declaration.

_____ _____
Gail Sevrens Date
Environmental Coordinator

Original Signature on File _____
Brian Hickey Date
Acting District Superintendent

Original Signature on File _____
Kathleen Amann Date
Manager, Northern Service Center

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CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

The Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Public Park Improvements Project at Eastshore State Park, Alameda County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq*., and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq*.

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less than significant level, a Mitigated Negative Declaration may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is DPR. The contact person for the lead agency regarding specific project information is:

Stuart Hong – Project Manager
California Department of Parks and Recreation
Northern Service Center
One Capitol Mall - Suite 500
Sacramento, California 95814
(916) 445-8760

Questions or comments regarding this Initial Study/Mitigated Negative Declaration should be submitted to:

Gail Sevrens – Environmental Coordinator
California Department of Parks and Recreation
Northern Service Center
One Capitol Mall - Suite 500
Sacramento, California 95814

Submissions must be in writing and postmarked or received by fax or email no later than January 16, 2004. The originals of any faxed document must be received by regular mail within ten working days following the deadline for comments, along with proof of successful fax transmission. Email or fax submissions must include full name and address.

1.3 COMMENTING EFFECTIVELY ON AN ENVIRONMENTAL DOCUMENT

Public participation is an essential part of the CEQA process. Review of environmental documents offer interested governmental agencies, private individuals, and organizations an opportunity to consider a proposed project and share expertise; evaluate agency analyses; check for completeness and accuracy; identify areas of concern; and present alternative or additional options for consideration. (California Code of Regulations §15200).

To comment effectively on an environmental document, consider the following points:

1. Objectively evaluate the project.
    - Consider the activities proposed as part of the project and determine if these actions could result in an impact or change to the environment.
    - If an impact could occur, would it be substantial or "significant"? Significance is determined by the amount of difference between what currently exists and what will exist during or following completion of the project.
    - If you conclude there would be a significant adverse effect, does the document agree with that assessment?
    - If the impact is potentially significant, are there mitigations (ways to reduce the severity of the impact) included in the document? Will they reduce the impact to a less than significant level? (For an MND, mitigations must reduce all potentially significant impacts to a less than significant level. For an EIR, impacts must be reduced to the extent feasible. All mitigations must be feasible and enforceable).
    - If a potential significant impact has not, in the reviewer's opinion, been adequately identified; if no mitigation has been proposed for a potentially significant impact; or if the mitigation proposed does not appear to be sufficient or appropriate, the reviewer should:
        - Identify the specific impact in question;
        - Explain why you believe the impact would occur;
        - Explain why you believe the effect would be significant (§15204[b]); and, if applicable,
        - Explain what additional mitigation measure(s) or changes in proposed mitigations you would recommend.

2. Explain the basis for your comments and recommendations (facts, reasonable assumptions based on facts, or expert opinion supported by facts) and, whenever possible, submit specific data and/or references supporting your conclusions (§15204[d]).

3. Make sure comments are submitted before the deadline. Comments postmarked after the close of the public review period will not be accepted. If necessary, fax your comments on or before the close of the review period and follow up by regular mail. Comments must be submitted in writing and must include your name and a valid address. Email addresses are not sufficient.

4. Reviewing agencies or organizations should include the name of a contact person, who would be available for questions or consultation, along with their comments. (§15204[c]).

1.4 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Public Park Improvements Project at Eastshore State Park. Mitigation measures have also been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less than significant level.

This document is organized as follows:

- Chapter 1 - Introduction.
  This chapter provides an introduction to the project and describes the purpose and organization of this document.

- Chapter 2 - Project Description.
  This chapter describes the reasons for the project, scope of the project, and project objectives.

- Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures.
  This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the potential impacts identified in the CEQA Environmental (Initial Study) Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less than significant level.

- Chapter 4 - Mandatory Findings of Significance.
  This chapter identifies and summarizes the overall significance of any potential impacts to natural and cultural resources, cumulative impacts, and impacts to humans, as identified in the Initial Study.

- Chapter 5 - Summary of Mitigation Measures.
  This chapter summarizes the mitigation measures incorporated into the project as a result of the Initial Study.

- Chapter 6 - References.
  This chapter identifies the references and sources used in the preparation of this IS/MND.

- Chapter 7 - Report Preparation.
  This chapter provides a list of those involved in the preparation of this document.

1.5 SUMMARY OF FINDINGS

Chapter 3 of this document contains the Environmental (Initial Study) Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each impact resulting from implementation of the proposed project.

Based on the IS and supporting environmental analysis provided in this document, the proposed Public Park Improvements Project would result in less than significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

In accordance with §15064(f) of the CEQA Guidelines, an MND shall be prepared if the proposed project will not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with the CEQA Guidelines.

CHAPTER 2
PROJECT DESCRIPTION

2.1 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Public Park Improvements Project at Eastshore State Park (SP). The proposed project would provide protection and enhancement of wetlands and upland native habitat; public trails and service access; fencing to protect sensitive areas; facilities for park operations; interpretive, regulatory, and entrance signage; and associated utility work.

2.2 PROJECT LOCATION

Eastshore State Park extends approximately 8.5 miles along the eastern shoreline of San Francisco Bay, from the San Francisco-Oakland Bay Bridge north to the Marina Bay neighborhood in the City of Richmond. The park includes approximately 2,262 acres of uplands and tidelands along the waterfronts of the cities of Oakland, Emeryville, Berkeley, Albany, and Richmond (see Vicinity Map, Figure 1, Appendix A).

Work proposed as part of this project will occur at the Berkeley Meadow and the Brickyard areas, within Eastshore SP. Both project areas are within the Berkeley city limits, in Alameda County, west of Interstate 80 (I80). This land was formed as a result of mid-20th century landfill operations by the City of Berkeley and surrounding communities. The sites can be reached via University Avenue from downtown Berkeley or the University Avenue Exit west off I80 (see project site map, Figure 2, Appendix A).

The Brickyard is a large irregular-shaped peninsula, about 30 acres in size, located to the south of University Avenue and west of West Frontage Road (see Figure 3, Brickyard Area, Appendix A). The area consists of a relatively level, rectilinear parcel formed by the intersection of the two roadways, and a long slender peninsula that extends south into San Francisco Bay. This slender portion of the peninsula encloses a sheltered area referred to as Brickyard Cove, which includes the shallow open water, tidal mudflats, and a sand beach. The Brickyard's western shoreline is armored with large slabs of concrete rubble, and the eastern edge and area around the cove is littered with old bricks, which give the area its name. The piped outfall for Strawberry Creek is isolated at the northwest corner of the Brickyard.

The Berkeley Meadow (Meadow) is a large trapezoidal-shaped area of about 75 acres, bounded by West Frontage Road to the east, University Avenue to the south, Marina Boulevard to the west, and the North Basin and North Basin Strip to the north. The Virginia Street extension (a fire road, closed to public vehicle access) runs between the Meadow and the North Basin. The Meadow is a relatively level site that resulted from the placement of fill over mudflats and open water.

2.3 BACKGROUND AND NEED FOR THE PROJECT

The purpose of Eastshore SP, as noted in the 2002 Eastshore General Plan (GP), is to preserve and protect the natural, cultural, and aesthetic resources along the San Francisco Bay and to provide appropriate recreational opportunities. Over the past century and a half,

extensive shoreline modifications and bay fill have resulted in the loss of as much as 90 percent of the wetlands and tidal marshes that once edged the Bay. Eastshore State Park grew out of the efforts of Bay Area citizens and environmental organizations to stop the filling of San Francisco Bay and protect the waterfront as an open space resource in public ownership. Since World War II, citizens of Oakland, Emeryville, Berkeley, Albany, and Richmond have worked alongside groups such as the Sierra Club and Save the Bay to promote creation of a park along the East Bay shoreline (Eastshore GP, Chap. 1, p. 4). Land acquisition, along with lease and management agreements between DPR, the East Bay Regional Park District (EBRPD), and the city governments, finally resulted in the creation of Eastshore SP. In 2002, the Park's GP was completed with a tremendous amount of community input. This project will implement some of the developments envisioned within the GP.

Although the primary impetus for acquiring the properties that now make up Eastshore SP was to stop the loss of wetlands and tidal marshes, and protect the remaining shoreline habitat, the need for recreational space in this urban landscape was also a driving force. Over 100,000 people live in Berkeley and areas immediately adjacent to the project sites (Berkeley GP, Land Use Element, p. 4); this does not include visitors or residents from the surrounding communities of Oakland, Emeryville, Albany, and Richmond.

However, acquisition and/or control of a property does not transform it into a conservation area or usable urban park. The project areas (in fact, most of the Eastshore SP property) are retired landfill, containing household garbage, industrial waste, and construction materials deposited as bay fill for over 60 years. Currently, vegetation on most of the Berkeley Meadow site consists predominantly of nonnative and, in some cases, highly invasive plant species, with openings dominated by nonnative annual grasses. Areas of seasonal wetlands also contain invasive, nonnative plant species along with native willow species and other native wetland plants (Vegetation Management Plan, Appendix B). To convert this former landfill into the viable conservation area envisioned in the Park's GP, it is necessary to remove nonnative plant species and revegetate with appropriate native plants, grade/fill to improve drainage and support enhancements to existing wetlands and upland habitat, install protective fencing, and develop a formal trail system.

Likewise, the Brickyard area is currently a combination of two distinct areas. A large cleared area, largely devoid of vegetation, occupies approximately one-half of the Brickyard and is used for storage of clean fill dirt. A small concession building, the Seabreeze Market/Deli, and parking lot occupy the northeast corner of this area; seasonal Christmas tree sales occur on a portion of the lot. The remaining portion of the Brickyard contains conditions similar to the Meadow, but with fewer wetlands. Careful planning and extensive restoration and development will be necessary before this area can become an attractive recreational destination.

Finally, it should be noted that, while the areas are patrolled periodically by local police and EBRPD security officers, public use of both project areas has been generally unsupervised since the landfill ceased operation. Work in these areas will require an onsite presence to supervise project activities, maintain security for the newly developed or restored areas, and ensure compliance with regulations, such as pet restrictions and off-trail use in the Berkeley Meadow.

2.4 PROJECT OBJECTIVES

The intent of this project is to begin the conversion of the Eastshore SP property into a viable urban park, designed to protect and enhance the existing natural, cultural, and aesthetic resources and provide increased recreational opportunities to the public.

The work proposed for the Berkeley Meadow is expected to:

- Protect and enhance wetlands and upland native habitat, improve foraging opportunities for wildlife, and provide an undisturbed nesting area for raptors. Perimeter and interior trail fencing will protect and enhance natural habitat values while accommodating lower intensity recreation that is compatible with and dependent on those values.
- Provide opportunities for park visitors to observe and understand the area's wildlife and the restoration process. Interpretive signs and viewing areas along the trail system will be provided to enhance the visitor experience.
- Provide improved disabled accessibility, in compliance with the Americans with Disabilities Act (ADA).

The work proposed for the Brickyard area is expected to:

- Provide a comprehensive plan to guide the development of recreational opportunities and visitor services at the Brickyard.
- Provide onsite facilities to establish a park operation, security, and maintenance presence within Eastshore SP.
- Provide educational, regulatory, and directional signage/media, increasing public understanding of the park's development process, improving public safety, and enhancing the visitor experience.

Additionally, this project furthers the DPR mission by contributing to the following objectives:

- Protect and preserve the State's extraordinary biological diversity.
- Support public understanding of the significance and value of the state's natural and cultural resources through education, interpretation, and leadership.
- Improve the quality of life in California through diverse, high quality recreation experiences and opportunities.

It also supports the Berkeley Waterfront Plan (Berkeley GP, Land Use Element, p. 33) by:

- Maintaining these waterfront properties as areas dedicated to recreational, open space, and environmental uses, with preservation and enhancement of beaches, marshes, and other natural habitats.
- Establishing an area that will be attractive to and usable by citizens of Berkeley, neighboring bay area residents, and other visitors.
- Supporting uses and activities that foster the community's relationship with the shoreline.

2.5 PROJECT DESCRIPTION

Berkeley Meadow Area

Hazardous Material Study

Review existing chemical and remediation survey data for soils, groundwater, surface water, and soil gas. Determine and conduct necessary additional testing to establish safety of grading, trenching, excavation, and hand, mechanical and/or chemical removal of exotic

vegetation (all such activities will be conducted in accordance with the results of the study). Conduct necessary remediation, including but not limited to, covering areas with clean fill.

Debris Removal
Remove existing asphalt and base material of former roadway that runs approximately north-south through the meadow. Consider grinding up the removed asphalt and using it for base material for proposed perimeter trails. Remove other exposed construction or other debris from the site; if extensive debris is identified, cap exposed debris and grade adjacent areas.

Seasonal Wetland Habitat Enhancements
Conduct a survey to determine the existence of any special status species within the wetland areas. Enhance existing wetlands by selectively removing nonnative vegetation and revegetating with native wetland species. Methods for nonnative vegetation removal include strategic phasing of removal efforts to assure continued wildlife use. As removal and revegetation efforts progress, work could include hand pulling; herbicide application to target exotic plant species with chemicals appropriate for use near water, selective removal of target species; and/or mowing.

Create new wetlands, after evaluation of potential worker, wildlife, and/or public safety hazards that could be involved with the work. Methods to create new wetlands could include adding fill, recontouring, lining low depression areas with compacted clay or other toxic-containment impermeable materials deemed necessary by toxics studies, and seeding or planting with wetland plant species native to the area.

Phase 1 Upland Habitat Enhancements
Conduct a survey to determine the existence of any special status species and wildlife activity. Identify native raptor nesting sites, and other significant existing native wildlife use of the upland areas currently dominated by exotic vegetation. Based on these evaluations, refine draft vegetation management plan, which prescribes a phased approach to removal of exotic vegetation and replacement with native vegetation that assures continued native wildlife habitat availability. Develop grading plan based on importing fill throughout upland area. All habitat enhancement work will be conducted based on results of these studies and plans.

The phased nonnative invasive plant species replacement with native vegetation may include removal of mature exotic trees such as black acacia, as well as immature nonnative trees such as eucalyptus saplings. Mature nonnative eucalyptus trees will not be removed. Methods for nonnative plant removal could include hand pulling, mechanical removal, herbicide application with selective chemicals that are appropriate for use on the targeted exotic species, covering exotics with clean fill, and/or mowing. Selective herbicides have been proven to be very effective in selectively removing invasive exotics such as exotic fennel, thistle, and broom species without causing resultant damage to other grassland species. This prevents removal of all vegetation within an area at any given time. This selectivity also allows for continued wildlife use of the area under a phased removal and native vegetation restoration approach.

Areas covered with clean fill that are devoid of vegetation will be planted with grass seed to prevent erosion and additional exotic plant recruitment. Subsequently, these areas may be planted with native species to improve habitat, aesthetics, and viewshed. The erosion control

treatment could also include application of sterile mulch containing a hydroseed mix comprised of appropriate native species. Native species could include coastal scrub plants and/or grassland plants deemed suitable for the site that have a high probability of successfully occupying the site.

Initial enhancement efforts will be focused in the southwest corner of the Meadow. Mowing of exotic plant species, with possible use of herbicides, mechanical tools, chainsaws, and hand pulling, will occur within an area up to 16.5 acres. This integrated approach also allows for phasing of efforts to assure continued wildlife use. Native willow trees and coyote brush currently existing in this area will generally be protected from impacts of weed removal activities by flagging off sensitive areas and avoiding impacts to targeted natives wherever possible. After mowing, clean fill will be placed in upland areas away from identified wetlands and native willows and other preexisting native plants that will be preserved. After the fill is placed, native plant seed will be dispersed, possibly by hydroseeding, into both upland and wetland areas, and young plants may be planted. Follow-up maintenance of the site may include hand pulling, mulching, mowing, or the use of herbicides.

Trails

Establish a trail system that completes key linkages to other areas of the park and provides opportunities for interpretation of the natural resources. Construct an approximately 7,500 lineal foot trail, 12 feet wide. Install perimeter fencing around the Meadow, 48-54 inches tall and of metal construction. Designate a large, fenced, central “no access" (authorized access only) area to protect sensitive habitat areas from off-trail use and from dogs. Self-closing gates along the Meadow's perimeter fencing will provide access for pedestrians only to limited, through, and fenced internal trails to provide access and views into the restored interior. Interior trail fencing will be 36-42 inches tall, with wood posts and metal fencing, and will ensure that public access will be confined to developed trails. Install interpretive panels and regulatory signs at designated locations along both perimeter and interior trails.

Trail segments will include the following:

1. An east-west trail along the north side of University Avenue from West Frontage Road to Marina Boulevard.
2. A north-south trail along Marina Boulevard.
3. An east-west trail along the Virginia Street extension from West Frontage Road to Marina Boulevard.
4. A north-south trail along West Frontage Road.

All trails will be of stabilized soil to meet Americans with Disabilities Act (ADA) requirements and Access to Parks Guidelines, and will remain unobtrusive and natural in appearance. All trails will be able to accommodate emergency vehicles.

Interpretation/Signage

Construct interpretive panels and displays, and entry monument. Install regulatory signage.

Brickyard Area

Hazardous Material Study

Review existing chemical and remediation survey data for soils, groundwater, surface water, and soil gas. Determine and conduct necessary additional testing to establish safety of grading, trenching, excavation, and use of site for office and concession facilities (such activities will be conducted in accordance with the results of the study). Conduct indicated remediation.

Facilities Concept Study

Conduct a facilities concept study for development of a plan for the Brickyard area for the introduction of recreation and visitor facilities. The purpose of the plan would be to organize future development, provide concession opportunities, and act as a public outreach tool. The planning area boundary would run from University Avenue, across the Strawberry Creek outfall to the end of Brickyard Spit, across Brickyard Cove to West Frontage Road and back. The following potential facilities will be among those studied, based on the approved General Plan guidelines:

1. Park operations/visitor center
2. Café/restaurant/deli
3. Restroom facilities
4. Recreation concessions, such as equipment rentals
5. Turf areas for informal recreation
6. Picnic facilities
7. Benches and seating areas
8. A waterfront promenade that extends along the west side of the Brickyard Spit ending at a vista point
9. An internal trail system for the area with the appropriate connections to external trails
10. Bird blind near the outlet of Strawberry Creek
11. Parking for up to 200 cars
12. Interpretive panels and displays
13. Entry monument signs

Studies to be completed as part of the concept study include, but are not limited to:

- Hazardous materials study (see above)
- Special status species survey

Install Modular Trailer

Install a modular building to meet administrative, programmatic, and security needs of the park. Trailer will not exceed 24' wide by 60' long. Install needed utilities, including water, electrical, communications, and sewer. Provide adequate sewer connection for other future facilities such as concessions. Provide parking, south of the trailer, for up to 6-8 vehicles, including parking that meets Americans with Disabilities Act requirements.

Miscellaneous Site Improvements

Provide benches and tables, entrance monument, and site development related to other features.

2.6 PROJECT CONSTRUCTION

Construction for this project would begin in the fall of 2004 and take approximately three years to complete. Areas of the site under active construction would be restricted to authorized personnel only. Work would only occur during daylight hours. Weekend and/or holiday work may be implemented to accelerate the construction schedule.

Heavy equipment, such as backhoes, excavators, graders, bulldozers, and dump trucks, would be used during construction. Most equipment would be transported to the site and remain until the associated work is completed. Staging areas for the project would be within Eastshore SP boundaries and, possibly (with the permission of the City of Berkeley), on the parking area adjacent to the Berkeley Meadow property boundary, along Marina Blvd., just north of the University Avenue intersection. Transport vehicles for building components, material delivery trucks, and crew vehicles would also be present intermittently at the sites.

2.7 VISITATION TO EASTSHORE STATE PARK

Eastshore SP is composed of many components that span 8.5 miles along the bay shoreline. The park was fairly recently acquired; admission fees are not charged at any of the components, and there are no entrance stations or restrictions to access. Therefore, visitation is difficult to determine. However, it is estimated that the park receives up to 2.5 million visitors per year.[1]

According to EBRPD user surveys, the Berkeley Meadow and the existing concession at the Brickyard are the second-most visited areas in the park, after Point Isabel Regional Shoreline. Generally, peak season for most uses is from spring through fall, when the rains have passed. Peak periods of visitation occur during the weekends. During the week, peak periods are during the early morning and early evening hours. Given the absence of night lighting, there is little nighttime use within the project site.[2]

Visitation to Eastshore SP is expected to increase as areas within the park, such as the Berkeley Meadow and Brickyard, are developed. However, work proposed as part of this project would have limited impact on current visitation. Work at the Meadow would reduce areas accessible to visitors and limit certain activities, such as off-leash dog walking, that are incompatible with the designation of the site as a conservation area (Eastshore GP, 2002). Although plans and guidelines will be developed for the Brickyard, there would be little physical change at that location, except for the installation of a park office.

2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The proposed project is subject to the provisions of several land use plans, including the (1) Eastshore State Park General Plan (2002); (2) City of Berkeley land use plans, (3) San Francisco Bay Plan, and (4) San Francisco Bay Trail Plan, as discussed below.

[1] Eastshore Park Project General Plan, Environmental Impact Report, 2002, p. 169.

[2] Eastshore Park Project Resource Inventory, 2001, pp. R-3, R-4.

Eastshore State Park General Plan - The Eastshore SP General Plan (2002) sets forth Management Zone designations for various areas of the park. The Berkeley Meadow is designated as a Conservation Area, which provides for "areas whose natural habitat values will be protected and enhanced, while accommodating lower intensity recreation that is compatible with and dependent on those values." The Brickyard is designated as a Recreation Area, which provides for "areas that can accommodate more intensive recreation and are characterized as having limited habitat value and sufficient size to accommodate the necessary parking, utilities, and infrastructure needed to support recreational uses." The proposed project, which involves public access improvements and habitat enhancement at the Berkeley Meadow, installation of a modular park support facility at the Brickyard, and preparation of a facilities concept plan for the Brickyard area, is consistent with the Eastshore SP General Plan (GP), as it applies to the Berkeley Meadow and Brickyard areas.

City of Berkeley Land Use Plans - The City of Berkeley has actively supported and planned for the recreational uses of its waterfront. City policy calls for publicly owned waterfront land to be held as permanent open space. Key City of Berkeley documents guiding land use within the project site include the City of Berkeley General Plan (2003), West Berkeley Plan (1993), University Avenue Strategic Plan (1996), and the Waterfront Master Plan (1986). The City of Berkeley GP describes waterfront land use in the City of Berkeley and designates the project area as Open Space. The plan describes Open Space areas as being appropriate for "parks, open space, recreational facilities, natural habitat and woodlands." Allowable land uses include "parks, recreational facilities, schoolyards, community services, and facilities necessary for maintenance of the areas." The 1986 Waterfront Master Plan sets forth policies for non-open space land use along the Berkeley waterfront. Land use policy in the Waterfront Master Plan includes objectives for continuous shoreline access, building setbacks, water-oriented business development, an increase in the quantity and quality of open space for habitat and recreation, and building restrictions. Both the West Berkeley Plan and University Avenue Strategic Plan provide goals and guidelines for enhancing the shoreline area for recreation (especially pedestrian and bicycle use) and habitat protection. The proposed project, which involves public access and habitat improvements, is consistent with all mandates and goals for enhancing the waterfront public access and protection of shoreline natural resources.

San Francisco Bay Plan - The San Francisco Bay Plan (Bay Plan), under the provisions of the McAteer-Petris Act, allows the Bay Conservation and Development Commission (BCDC) to "exercise its authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within the area of its jurisdiction," an area that includes all of the Bay, a shoreline band 100 feet from the water, salt ponds, managed wetlands, and certain waterways associated with the Bay. The project area is located partially within the jurisdiction of BCDC and has a priority use designation of Waterfront Park/Beach in the Bay Plan (Plan Map 4). The proposed project, which involves public access improvements and habitat enhancement, is consistent with the land use designation in the Bay Plan.

San Francisco Bay Trail Plan - The San Francisco Bay Trail Plan (Bay Trail Plan) sets forth policy guidelines for the routing, design, implementation, and protection of the Bay Trail, a partially completed pedestrian and bike trail circumnavigating the San Francisco Bay. The Bay Trail is managed by the Bay Trail Project, a nonprofit organization, under the auspices of the Association of Bay Area Governments (ABAG). The Bay Trail Plan states that it is intended to

complement, rather than supercede, the policy of local managing agencies (Policy #42). However, the policy urges local land management agencies to include references to the Bay Trail in their planning and policy documents (Policy #41) and maintain and manage the trail once it is built (Policy #45). Several segments of the Bay Trail exist within the project site and would become an integral part of the park's facilities. The proposed project, which involves public access improvements and habitat enhancement, is consistent with the land use designation in the San Francisco Bay Plan and the policy guidelines contained in the San Francisco Bay Trail Plan.

For more information, see Chapter 3, Section IX, Land Use and Planning.

2.9 DISCRETIONARY APPROVALS

DPR has approval authority for implementation of projects within the boundaries of Eastshore State Park. However, the following permits and/or consultations may also be required before work can begin:

- Sewer System Permit from City of Berkeley Department of Public Works.
- Consultation with the State Fire Marshall.
- Shoreline Development Permit from BCDC.
- Notice of Intent (NOI) to Comply with the Terms of the General Permit to Discharge Stormwater Associated with Construction Activity - State Water Resources Control Board. Includes preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the General Permit.

The project would also adhere to all applicable local building and engineering regulations/ordinances set forth by City of Berkeley/Alameda County and the California Uniform Building Code.

2.10 RELATED PROJECTS

In addition to work within Eastshore State Park, projects conducted by agencies other than DPR may also affect the project site and the significance of any potential impacts to the environment. Projects in the vicinity of the proposed project that are planned include:

- The City of Berkeley has a proposed Bay Trail Extension to the Berkeley Marina Project that directly impacts the Brickyard portion of the project area as well as a trail spur along the south side of University Avenue to Marina Boulevard. A pedestrian/bicycle bridge over Strawberry Creek is proposed as part of the Bay Trail Extension project. The proposed extension is an important element of the Eastshore SP GP. Final alignment, design, and construction would be subject to further consideration and coordination with the Facilities Concept Plan that will be developed as part of this project.
- EBRPD has proposed the development of lighted sport fields on the northern portion of the North Basin Strip, adjacent to Eastshore SP.
- Friends of Five Creeks, a nonprofit group, has proposed daylighting Schoolhouse Creek, adjacent to Berkeley Meadow. A feasibility study is currently underway. A timeline for implementing this work has not been established.

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CHAPTER 3
ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1.	Project Title:	Public Park Improvements
2.	Lead Agency Name & Address:	California Department of Parks and Recreation
3.	Contact Person & Phone Number:	Stuart Hong - Project Manager (916) 445-8760 Gail Sevrens - Environmental Coordinator (916) 445-8827
4.	Project Location:	Eastshore State Park, Berkeley, Alameda County, California (See Appendix A for site maps)
5.	Project Sponsor Name & Address:	California Department of Parks and Recreation Northern Service Center One Capital Mall - Suite 500 Sacramento, California 95814
6.	General Plan Designation:	State Seashore (Classification) Eastshore Park Project General Plan (2002)
7.	Zoning:	Open Space City of Berkeley General Plan (2003)
8.	Description of Project:	Refer to Chapter 2, Section 2.5 of this document
9.	Surrounding Land Uses & Setting:	Refer to Chapter 3 of this document (Section IX, Land Use Planning)
10.	Approval Required from Other Public Agencies	Refer to Chapter 2, Section 2.9 of this document

1. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact", as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	☒ None

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment and a **NEGATIVE DECLARATION** will be prepared. ☐

I find that, although the original scope of the proposed project **COULD** have had a significant effect on the environment, there **WILL NOT** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

I find that the proposed project **MAY** have a significant effect on the environment and an **ENVIRONMENTAL IMPACT REPORT** or its functional equivalent will be prepared. ☐

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents. ☐

I find that, although the proposed project could have had a significant effect on the environment, because all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, all impacts have been avoided or mitigated to a less than significant level and no further action is required. ☐

_____ _____

Gail Sevrens — Date

Environmental Coordinator

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.

4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:

   a) Identify the earlier analysis and state where it is available for review.

   b) Indicate which effects from the envi ronmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.

   c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.

6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.

7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.

8. Explanation(s) of each issue should identify:
   a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
   b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

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ENVIRONMENTAL ISSUES

I. AESTHETICS.

ENVIRONMENTAL SETTING

Eastshore State Park is located in an urban area, on the eastern edge of San Francisco Bay (Bay), in the City of Berkeley, in Alameda County. Project activities will occur in the Brickyard and Berkeley Meadow areas of the park. These areas are bounded by the Bay to the west and Interstate 80/580 and the western edge of the Berkeley urban area to the east. (See Appendix A for project site maps.)

Because the entire project site was created by landfill operations, there are few visually significant resources (e.g., topographic changes, geologic formations, or stands of mature trees) on the site. However, the site's location on the western shoreline offers a vista combining water, sky, and distinctive natural and human-made features, including panoramic views of the San Francisco Bay and an array of distinctive landmarks, such as the San Francisco skyline, the San Francisco-Oakland Bay Bridge, the Golden Gate Bridge, Alcatraz Island, and Mt. Tamalpais. Evenings present visitors with magnificent sunsets backlighting the coastal mountains, bridges, and the Bay Area skyline. Many people visit the project site on a regular basis simply to view the sunset. To the east, landmarks such as the U.C. Berkeley Campanile and the Claremont Hotel are visible. The view to the east also affords visitors less scenic vistas of urban elements, such as freeways and industrial areas, along with the residential neighborhoods of the East Bay hills.

Fog is an ephemeral condition that affects views from the project site. Summer (June – August) is the peak foggy season, with the fog generally developing during the late afternoon and remaining until midmorning the following day. The project site is in the "fog belt," directly opposite the Golden Gate Bridge and the opening to San Francisco Bay. Typically, the fog banks roll in through the Golden Gate and move directly across to the east shore. While the effects of the fog can be dramatic, the value placed on its occurrence is subjective and will differ from individual to individual. Some find it simply a meteorological “nuisance” that they associate with the loss of sunshine and warmth, while others find it a unique and intriguing experience. In either case, fog is a defining characteristic of the San Francisco Bay Area and has a significant impact on views from and appearance of the project site.

Many areas within the project site show evidence of its history as an area landfill. The majority of the landfill material is construction debris. Materials, such as bricks, concrete, and steel reinforcing bar, are sometimes visible at the surface, especially in the Brickyard. Vegetation has covered much of the debris, reducing its visibility from a distance. However, it will still be seen by those walking the site or along the water, where construction debris has been used to stabilize the shoreline. In addition, although the area is no longer used as a landfill, debris still washes up on the shoreline from the Bay. Some garbage left by visitors is also evident on the site and along the shore, including cans, bottles, and plastic wrappers. Larger items, such as automobile tires and wooden timbers, also wash ashore. Illegal overnight encampments are also found in isolated pockets throughout the brushy areas of both the Brickyard and the Meadow.

The current "put-and-take" operation, located in the southwest quadrant of University Avenue and West Frontage Road within the Brickyard area, temporarily stores clean dirt fill material (i.e., those with fill material to dispose “put” it on the site, and those with a need for fill material “take” it away) in large mounds that obscure views of the Bay from areas along the West Frontage Road. The constant movement and mounding of soil materials results in an area devoid of vegetation and the continuous activity of earthmovers and large trucks associated with this operation generate dust, mud, and noise that further detracts from the appeal of the area.

A small cluster of structures at the northeast corner of the Brickyard form the Seabreeze Market/Deli concession, and are the only buildings currently on the project site. Limited landscaping does little to disguise the temporary appearance of the buildings and utilitarian chain link fencing along the highway and trails. Seasonal sales lots in the Brickyard, Berkeley Meadow, and North Basin Strip add additional fencing and lighting, further reducing the aesthetic appearance and appeal of the area.

Overhead utility lines within the project site run east-west along the Virginia Street extension right-of-way between the Meadow and the North Basin shoreline. A limited number of poles and line also extend into the Meadow and North Basin Strip, adjacent to the West Frontage Road, to service the seasonal pumpkin and Christmas tree sales lots. Otherwise, the skyline is remarkably free of utility poles and lines. “Cobra head” streetlights are used along University Avenue, between the Brickyard and Meadow sites, but generally do not detract from the nighttime views of the Bay.

Classification of Scenic Importance.
The 2001 Resource Inventory for Eastshore SP classifies three categories of "Zones of Scenic Importance" in order to facilitate the management of the scenic resource:
Category 1: areas with significant scenic value associated with both significant onsite resources and offsite views. This category is the most sensitive and requires particular attention to the location and character of improvements in terms of their affect on the visual resources both internal and external to the project site.
Category 2: areas with significant scenic offsite views, but limited visual resources onsite. The primary concern is ensuring that the location of improvements does not impact the appreciation of external resources (e.g., does not obstruct or diminish scenic views from either internal or external viewpoints). The Brickyard is designated in this category.
Category 3: areas with limited visual resources onsite, and limited scenic views offsite. These areas are the least scenically sensitive, so the primary management concern is less on impact to existing resources and more on ensuring compatibility with, and enhancing, the area’s visual quality. The Berkeley Meadow is classified as Category 3.

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

DISCUSSION

a) Most of the work proposed as part of this project would have little effect on the scenic vistas associated with these sites. Location of the park office facilities along the shoreline would block a small portion of the Bay view from the existing Seabreeze parking area, but the building would be set back from the shore, allowing visitors an unobstructed view from in front or either side of the building. The modular office would be equivalent in construction, general appearance, and height to nearby light industry and office buildings. It would be of standard design, with unobtrusive colors. The placement of the proposed structure and fencing would not block or interfere with local views from any existing buildings. Less than significant impact.

b) The project site is adjacent to interstate 80/580. This portion of the interstate is not designated a scenic highway. There are no historic structures or geological features present on either of the project sites. Some nonnative trees, saplings, and bushes (such as black acacia) will be removed from the Meadow; however, mature eucalyptus trees will be retained. Additionally, native shrubs will be planted, which will ultimately retain the current general appearance. Less than significant impact.

c) The proposed project sites consist of a retired landfill covered with scrub and nonnative plants, with portions used for a put-and-take fill dirt operation. The perimeter fence at the Meadow will be coated with black plastic to make it unobtrusive and the interior fencing in the Meadow will be low--36 to 42 inches tall--with wood posts. Interpretive and regulatory signs will be oriented to reduce or avoid blocking views. The entry monument will be of a design that will be aesthetically pleasing and consistent with other park monuments and signs. Other activities proposed as part of this project are designed to protect and enhance the natural resources and aesthetic appearance of the properties. Less than significant impact.

d) It is expected that all construction work for the proposed project will be limited to daylight hours, eliminating the need for work lights. However, emergency situations could require minimal use of exterior construction lights on a limited basis. As noted in the Environmental Setting above, exterior lighting already exists in the parking areas of the

Seabreeze Market and along University Avenue. Glare shields would be used on all light sources and work areas would be confined to a maximum of a few hundred feet at any one time. Less than significant impact.

Both interior and exterior permanent lighting are components necessary for the operation of the completed modular office, but exterior lighting would be limited to fixtures and levels necessary for security and public safety. The majority of office use would occur during normal business (daylight) hours, reducing the amount of both interior and exterior illumination created during regular operation or after dark. The existing concession maintains some level of interior, exterior, and security lighting within visual range of the proposed office. The lighting associated with this project would not add significantly to the current local or overall nighttime illumination of the area or create a defining point of illumination. Therefore, the project would have a less than significant impact.

II. AGRICULTURAL RESOURCES.

ENVIRONMENTAL SETTING

Eastshore SP extends approximately 8.5 miles along the eastern shoreline of San Francisco Bay from the San Francisco-Oakland Bay Bridge north to the Marina Bay neighborhood in the City of Richmond. The park includes approximately 2,262 acres of uplands and tidelands along the waterfronts of the cities of Oakland, Emeryville, Berkeley, Albany, and Richmond. The proposed project would occur within the Berkeley Meadow and Brickyard areas of the park, located entirely within the Berkeley City limits. (See Appendix A for project site maps.)

The project area is designated as Open Space in the Berkeley General Plan (2003). The project area is currently used for recreation and is bound by San Francisco Bay to the west and urban land uses to the east, including I80, residential, commercial, and industrial areas. The project site and adjacent land does not contain any zoned agricultural lands and is not used for any agricultural purposes. None of the land within Eastshore SP, the area immediately surrounding the park, or area impacted by the proposed project is included in any of the Important Farmland categories, as delineated by the California Department of Conservation, under the Farmland Mapping and Monitoring Program (FMMP).

WOULD THE PROJECT*:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

* In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

DISCUSSION

a-c) As noted in the Environmental Setting above, the proposed project site does not support any agricultural operations or farmland; would not interfere with the use of, or result in the conversion of agricultural land to a non-agricultural use; and would have no effect on any category of California Farmland, conflict with any existing zoning for agricultural use or Williamson Act contract, or result in the conversion of Farmland to non-agricultural use. No impact.

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III. AIR QUALITY.

ENVIRONMENTAL SETTING

Eastshore SP is located within the San Francisco Bay Area Air Basin (SFBAAB) and falls under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and United States Environmental Protection Agency (US EPA) Region IX. (See Appendix A for project site maps.)

The San Francisco Bay Area climate is characterized by cool summers, mild winters, and infrequent rainfall. The atmospheric processes often combine to restrict the ability of the atmosphere to disperse air pollution. Frequent dry periods occur during the winter when ventilation (rapid horizontal movement of air and injection of clean air) and vertical mixing are low, and pollutant levels build up. During rainy periods, however, ventilation and vertical mixing are usually high, leading to low levels of air pollution.

Both the State and federal governments have established health-based Ambient Air Quality Standards (AAQS) for six air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), lead (Pb), suspended particulate matter (PM_{10}, or particles with an aerodynamic diameter of 10 microns or less), and sulfur dioxide (SO_2). In addition, the State has set standards for sulfates, hydrogen sulfide (H_2S), vinyl chloride (VC), and visibility-reducing particles (VRPs). The major pollutants of concern in the San Francisco Bay Area include ozone (O_3), carbon monoxide (CO), and suspended particulate matter (PM_{10}).

According to data from the California Air Resource Board (2002), the SFBAAB was in attainment with California standards for carbon monoxide and sulfates and unclassified for hydrogen sulfide. An area is designated in attainment if the state standard for the specified pollutant was not violated at any site during a three-year period. An area is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

As of 2002, the SFBAAB was in nonattainment for ozone and PM_{10}. An area is designated in nonattainment if there was at least one violation of a state standard for the specified pollutant within the area boundaries. Emissions of ozone precursors have decreased in the SFBAAB for both mobile and stationary sources, despite a significant increase in vehicle miles traveled (VMT), and overall ozone concentrations have decreased slightly for 1999, 2000, and 2001 (ARB Almanac 2003).

With respect to federal standards, the SFBAAB is in a nonattainment zone for ozone; an unclassified/attainment zone for carbon monoxide, and unclassified for hydrogen sulfide and PM_{10}. (Area Designation Maps for both state and federal standards, per CARB 2002.)

All areas in the State are either in attainment or unclassified under state standards for nitrogen dioxide, sulfur dioxide, lead, and VRPs. However, PM_{10} (which includes dust and smoke particles) is a VRP, indicating a possible reason for concern in this area. Many sources of PM_{10} are seasonal, so annual averages may be lower than the peak events.

The SFBAAB is a transport contributor to six adjacent Air Basins: Broader Sacramento Area, Mountain Counties, North Central Coast, North Coast, San Joaquin Valley, and South Central Coast. (2003 ARB Almanac)

WOULD THE PROJECT*:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

* Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make these determinations.

DISCUSSION

a) The proposed project would occur at the Berkeley Meadow and Brickyard areas of Eastshore SP, located in the City of Berkeley. Work proposed by this project, and any associated emissions, would not conflict with or obstruct the implementation of any applicable air quality management plan. No impact.

b,c) The proposed project would not emit air contaminants at levels that, by themselves, would violate any local, state, or federal ambient air quality standard, or contribute to a permanent or long-term increase in any air contaminant. However, project construction would generate short-term emissions of fugitive dust (PM_{10}) and involve the use of equipment that would emit ozone precursors (i.e., reactive organic gases [ROG] and nitrogen oxides, or NOx). Construction-related emissions are generally short-term in duration, but may still cause adverse air quality impacts. Increased emissions of PM_{10}, ROG, and NOx could contribute to existing nonattainment conditions and interfere with achieving the projected attainment standards. Consequently, construction emissions would be considered a potentially significant short-term adverse impact.

The BAAQMD has identified a set of PM_{10} control measures for construction activities, including "Basic Measures" to be implemented at all construction sites regardless of size, and "Enhanced Measures" to be implemented at construction sites greater than four acres, where PM_{10} emissions are generally higher (*BAAMD CEQA Guidelines – Assessing the Air Quality Impacts of Projects and Plans,* 1999). The BAAQMD does not require construction emissions to be quantified. With the implementation of adequate control measures, air quality impacts associated with construction are considered to be less than significant. Therefore, implementation of the following mitigation measures, which include "Basic Measures" and "Enhanced Measures," as appropriate and feasible, in accordance with the BAAQMD guidelines, would reduce potential air quality impacts to a less than significant level.

MITIGATION MEASURE AIR-1

- All active construction areas would be watered at least twice daily during dry, dusty conditions.
- All trucks hauling soil, sand, or other loose materials on public roads would be covered or required to maintain at least two feet of freeboard.
- All equipment engines would be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Excavation and grading activities would be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or dust from construction might obscure driver visibility on public roads.
- Stockpiles of friable material (dirt, sand, etc.) would be enclosed, covered, watered twice daily, or have (nontoxic) soil binders applied as required.
- Traffic speeds would be limited to 15 mph on unpaved roads.
- Sandbags or other erosion control measures would be installed, as necessary, to prevent silt runoff to public roadways.
- Disturbed areas would be replanted as quickly as feasible.

d) As noted in Discussion III (b,c) above, project construction has the potential to generate dust and equipment exhaust emissions. Eastshore SP, including the Meadow and Brickyard areas, is actively used by visitors for a variety of recreational purposes. The proposed project is expected to take approximately three years to complete. During this time, the park would remain open to public access with the exception of areas immediately surrounding construction work (e.g., trail construction, habitat enhancement, office construction). Visitors utilizing the areas immediately adjacent to construction operations may be exposed to increased pollutant concentrations (e.g. dust, vehicle exhaust). However, Eastshore SP extends approximately eight and one-half miles along the Bay shoreline and is located adjacent to several other open space and recreation areas. As such, park visitors with conditions that make them sensitive to these emissions would have the option of avoiding the area altogether or remaining in portions of the park that would be upwind or protected from blowing dust or other emissions. Typical local winds during the day are from the southwest and west as air is dispersed throughout the Bay Area. At night, an offshore wind typically develops, blowing from the Central Valley toward the ocean. The prevailing wind distribution results in rapidly ventilating the area in the daytime

with clean marine air and corresponding good air quality during the time when construction would occur (e.g., 7 a.m. to 5 p.m.). These conditions, in conjunction with Mitigation Measure AIR-1 above, would reduce any potentially adverse impact to a less than significant level.

e) The proposed work would not result in the long-term generation of odors. Construction-related emissions may result in a short-term generation of odors, including diesel exhaust and fuel vapors. These odors might be considered objectionable by some park visitors and personnel. However, because construction activities would be short-term and odorous emissions would dissipate rapidly in the air, with increased distance from the source, visitor exposure to these odors would be extremely limited [see (d) above], potential odor impacts would be considered less than significant.

IV. BIOLOGICAL RESOURCES.

ENVIRONMENTAL SETTING

The Berkeley Meadow area of Eastshore SP is a trapezoidal-shaped area of approximately 75 acres, bound by the North Basin waterfront and North Basin Strip to the north, University Avenue to the south, West Frontage Road to the east, and Marina Boulevard and the Berkeley Marina to the west. The Meadow is a relatively level site, created by placing fill over mudflats and open water, and has north and south shorelines with rock revetment and concrete debris. It is protected to the north by Cesar E. Chavez Park and exposed to the San Francisco Bay to the south, adjacent to University Avenue. Schoolhouse Creek discharges into the North Basin, adjacent to the northeast corner of the Meadow. (See Appendix A for project site maps.)

The Brickyard portion of the park is immediately south of Berkeley Meadow; University Avenue, which terminates at the bay, separates the two parcels. The Brickyard area is a large irregular-shaped parcel of about 30 acres of bay fill, with a narrow finger-shaped peninsula extending south that partially encloses Brickyard Cove. The outer west face of the peninsula is armored with concrete debris and an eastern edge consisting almost entirely of bricks. This spit protects the large mudflat and sand beach of the Cove. Interstate 80 and the West Frontage Road form the eastern boundary of the Brickyard, University Avenue defines its northern extent, and the San Francisco Bay and its tidal mudflats border the west and south. The Strawberry Creek outfall discharges into the Bay at the northwestern edge of this component. The narrow southeastern extension of the Brickyard continues south, merging into the Berkeley Beach section of Eastshore SP.

VEGETATION

Vegetation at the Meadow has developed from mostly nonnative seeds contained in the fill material or blown in from surrounding areas. A few native pioneer species, such as coyote brush *(Baccharis pilularis),* occupy a portion of the site, but the plant communities largely consist of nonnative species.

For the most part, vegetation in the Berkeley Meadow cannot be adequately described by the Sawyer/Keeler-Wolf (1995) classification system, which is the standard system used by State agencies. The upland plant communities include areas of mostly nonnative vegetation that can best be defined as Ruderal Scrub and a few locations with poorly differentiated Annual Grassland. Scattered throughout the project site are 8.72 acres of seasonal wetlands that are composed of mostly nonnative plant species, although a few of these wetlands contain native arroyo willow *(Salix lasiolepis).*

The Ruderal Scrub plant community is mostly dominated by nonnative species and a few natives such as coyote brush and cocklebur (*Xanthium strumarium*). Although identified in *The Jepson Manual, Higher Plants of California* (Hickman, ed., 1993) as native, cocklebur is a species of worldwide distribution that prefers disturbed sites and functions as a weed in native ecosystems. Commonly encountered nonnative plants include fennel *(Foeniculum vulgare),* bristly ox-tongue *(Picris echiodes),* poison hemlock *(Conium maculatum),* sheep sorrel *(Rumex acetosella),* wild radish *(Raphanus sativus),* common plantain *(Plantago major),* and cheeseweed *(Malva* sp.). Fennel, a highly invasive exotic plant, is the single most extensive

species within the project area. A few scattered native pickleweed *(Salicornia virginica)* plants occur in locations bordering the Virginia Avenue extension, probably occupying areas that experience saline groundwater intrusion.

Areas occupied by Annual Grassland are dominated by nonnative species, including slender wild oat *(Avena barbata),* soft chess *(Bromus hordaceous),* ripgut grass *(Bromus diandrus),* Italian ryegrass *(Lolium multiflorum),* common plantain, English plantain *(Plantago lanceolata),* and common mustard *(Brassica* sp.).

Widely scattered throughout the upland communities are small patches of other invasive nonindigenous or nonnative trees and shrubs. At the eastern end of the Meadow are several nonnative eucalyptus *(Eucalyptus globulus)* and nonindigenous pine *(Pinus* sp.). Small patches of highly invasive giant reed grass *(Arundo donax)* occur in the eastern and western sections of the site.

Most of the seasonal wetlands in the Meadow are composed of cocklebur and nonnatives, such as English plantain, Italian ryegrass, bristly ox-tongue, and curly dock *(Rumex crispus).* Native arroyo willow occurs either in or adjacent to a few of these wetlands.

Most of the upland acreage at the Brickyard is bare ground, currently occupied by a "put-and-take" dirt fill operation. Vegetation on this property is limited to a narrow fringe of vegetation bordering the Cove and a patch of vegetation at the eastern boundary, adjacent to the Berkeley Pedestrian/Bicycle Bridge over Interstate 80. A plant community best described as Pickleweed Series (Sawyer/Keeler-Wolf 1995) borders the Cove. Commonly encountered species in this community include pickleweed, salt grass *(Distichlis spicata),* and marsh rosemary *(Limonium californicum).* The pickleweed community is most extensive near the Strawberry Creek outfall into the Cove.

Vegetation adjacent to the Berkeley pedestrian/bicycle I80 overpass bridge is a mixture of a Bulrush-Cattail Series, bordered by arroyo willow, and a small area of Ruderal Scrub. Perennial, emergent cattail *(Typha* sp.) and bulrush *(Scirpus* sp.) dominate the Bulrush-Cattail Series, which has formed in a small basin that receives tidal waters, at least during high tides. The Ruderal Scrub is composed of mostly nonnatives, such as Himalayan berry *(Rubus discolor),* fennel, bristly ox-tongue, yellow star-thistle *(Centaurea solstitialis),* hairy cat's-ear *(Hypochaeris radicata),* and English plantain.

SPECIAL-STATUS SPECIES[3]

Sensitive biological resources that occur or potentially occur on the proposed project site are discussed in this section. Sensitive biological resources include the plants and animals that have been given special recognition by federal, State, or local resource agencies and

[3] For the purposes of this document, special-status species are defined as plants and animals that are legally protected or that are considered sensitive by federal, State, or local resource conservation agencies and organizations. Specifically, this includes species listed as State or federally Threatened or Endangered, those considered as candidates for listing as Threatened or Endangered, species identified by the USFWS and/or CDFG as Species of Concern, animals identified by CDFG as Fully Protected or Protected, and plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered (i.e., plants on CNPS lists 1 and 2).

organizations. Sensitive species include Threatened and Endangered plant and wildlife species and California Species of Special Concern, which are special-status species that have legal protection. Also considered are habitats listed as critical for the survival of a listed species or that have special value for wildlife, and plant communities that are unique or of limited distribution. The species evaluated are listed in Appendix C. Specific information on the biological resources is provided, along with potential impacts to those resources from the proposed exotic plant removal and creation of native plant communities and habitat.

All sensitive species and their habitats were evaluated for potential impacts by this project. A query of the California Department of Fish and Game's Natural Diversity Database (CNDDB) was conducted for sensitive species and habitats within the Oakland West and Richmond 7.5-minute USGS quadrangle maps. Special-status plant species potentially occurring in the two quadrangle maps were derived from the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (6th edition, electronic version, 2001).

THREATENED AND ENDANGERED SPECIES AND SPECIES OF SPECIAL CONCERN

The following special-status species are the result of the CNDDB and CNPS queries for the quadrangle maps mentioned above and a review of the Eastshore Park Project Resource Inventory (2001).

Plant Species - The CNDDB reports occurrences of 17 special-status plant species for the Oakland West and Richmond 7.5-minute quadrangles. The CNPS lists 17 special-status species (all CNPS List 1B or List 2) for the Oakland West and Richmond quadrangles, of which eight are described as probably extirpated (completely removed) from these quadrangles. Fourteen of these species also appear on the CNDDB list. The Eastshore Resource Inventory identifies one other special-status species that does not appear on the CNDDB and CNPS lists for the aforementioned quadrangles. Suitable habitat does not exist within the project area for most of the species that are identified in these three sources. None of these species are currently known to occur in, or in the immediate vicinity of, the project area.

Four of the species, California seablite *(Suaeda californica),* Point Reyes bird's-beak *(Cordylanthus maritimus* ssp. *palustris),* soft bird's-beak *(Cordylanthus mollis* ssp. *mollis),* and Delta tule pea *(Lathryus jepsonii* var. *jepsonii)* are restricted to salt or freshwater marshes and swamps, which are habitat types not found within the project area. Beach layia *(Layia carnosa),* rose linanthus *(Linanthus rosaceus),* and coastal bluff morning-glory *(Calystegia purpurata* ssp. *saxicola)* are limited to coastal dunes and/or coastal scrub habitats that also do not occur within the APE of the project. The chaparral, closed-cone coniferous forest, and coastal scrub habitats required by Kellogg's horkelia *(Horkelia cuneata* ssp. *sericea)* are absent from the area of the project. Alkali milk-vetch *(Astragalus tener* var. *tener)* is restricted to adobe clay of interior grasslands and alkaline vernal pools, both specific habitat types that do not exist within the project area.

Very marginally suitable habitat exists for ten species, none of which have been reported to occur in the Meadow. These species are described in the following pages.

Plant Species Potentially Occurring within the Project Area

Bent-flowered fiddleneck *(Amsinckia lunaris)* - This CNPS List 1B species blooms from March through June and occurs in coastal bluff scrub, cismontane woodland, and interior grasslands habitats of several counties, including Alameda County. However, it is highly unlikely that this species exists within the project area because the first two habitats are absent from the site and the grassland areas are mostly lacking native habitat components.

Diablo helianthella *(Helianthella castanea)* - This CNPS List 1B species inhabits sites within many habitat types, but is typically found in open grasslands. It blooms from April through June at elevations greater than 200 feet. Although this species is known to occur in Alameda County, it is highly unlikely that it exists within the Meadow or Brickyard areas because of elevation limitations.

Fragrant fritillary *(Fritillaria liliacea)* - Fragrant fritillary, a CNPS List 1B species, occurs in several coastal counties, including Alameda County. It inhabits coastal prairie, coastal scrub, interior grasslands, and cismontane woodland habitats. The occurrence from the Richmond quadrangle is reported extirpated. Grassland areas within the project area are mostly lacking native habitat components and, therefore, fragrant fritillary is unlikely to occur there.

Pallid manzanita *(Arctostaphylos pallida)* - This CNPS List 1B species blooms from December through March and has a State Endangered and Federal Threatened listing status. It occurs in several habitat types of Alameda and Contra Costa County. All reported occurrences have been found at elevations above 600 feet. Given the species' known habitat preferences, there is little likelihood this species is present in the project area.

Robust spineflower *(Chorizanthe robusta* var. *robusta)* - Blooming from April through September, this CNPS List 1B plant has a Federal Endangered listing status. It inhabits coastal scrub, coastal dunes, and cismontane woodland habitat in a few coastal counties. All previously known occurrences in Alameda and San Mateo counties are reported as extirpated. The project area is mostly lacking native habitat components; therefore, it is very unlikely the species occurs in this or adjacent locations.

Round-leaved filaree *(Erodium macrophyllum)* - This CNPS List 2 species has a widespread distribution in coastal, inland valley, and foothill locations of the State. It can be found in cismontane woodland and interior grassland habitats on clay soils. The blooming period is March through May. Due to the lack of native habitat components necessary for this species, it is doubtful that round-leaved filaree resides in the project area or adjacent locations.

Saline clover *(Trifolium depauperatum* var. *hydrophilum)* - Saline clover, a CNPS List 1B species, is restricted to mesic grasslands, vernal pools, marshes, and swamps. Its blooming period is April through June. Grassland and seasonal wetland habitats (functionally equivalent to vernal pools) within the project area are mostly lacking native habitat components, making it highly unlikely that saline clover occurs there.

San Francisco Bay spineflower *(Chorizanthe cuspidata* var. *cuspidata)* - This CNPS List 1B species blooms from April through August. It inhabits areas of coastal scrub, coastal dunes, and coastal prairie of coastal counties, but is reported to be extirpated from Alameda County.

Both dune and scrub habitats are absent from the project area and the grassland areas (i.e. coastal prairie) are mostly lacking native habitat components. Based on this information, it is highly unlikely that the San Francisco Bay spineflower occurs in the project area.

Santa Cruz tarplant *(Holocarpha macradenia)* - Blooming from June through October, this CNPS List 1B species has a State Endangered and Federal Threatened listing status. Santa Cruz tarplant occurs in coastal prairie, interior grasslands, and coastal scrub of Monterey and Santa Cruz counties. Occurrences from Alameda and Contra Costa counties are reported as extirpated. Areas within the project that support grassland vegetation mostly lack native habitat components. It is highly unlikely that this species occurs in the project area or adjacent locations.

Western leatherwood *(Dirca occidentalis)* - This CNPS List 1B species blooms from January through April. It occurs in a broad spectrum of habitats, including cismontane woodland, chaparral, and riparian scrub/woodland. Although reported in Alameda and Contra Costa counties, all known occurrences are above about 150 feet in elevation. There is little likelihood this species is present in the project area, given its known habitat preferences and the lack of native habitat components.

Wildlife Species - Wildlife is abundant in Eastshore SP, due to the park's location adjacent to the San Francisco Bay and the diversity of habitats. Ruderal scrub, nonnative annual grassland, and nontidal seasonal wetlands dominate the project site in the Meadow. The Brickyard portion of the project area is largely disturbed and mostly barren, but contains some ruderal scrub and nonnative annual grassland. There are also willow thickets and coyote bush scattered through the project area, providing rich bird habitat. The Eastshore Park Project Resource Inventory lists a number of species found in the ruderal scrub habitat of the park, including: brewer's blackbird, red-winged blackbird, Anna's hummingbird, lesser goldfinch, and the special-status loggerhead shrike. Species commonly found in the grassland include the western fence lizard, western terrestrial garter snake, gopher snake, California ground squirrel, Botta's pocket gopher, black-tailed hare, white-crowned sparrow, mourning dove, savannah sparrow, and western meadowlark. In addition, the annual grassland provides important foraging habitat for raptors, such as the American kestrel, red-tailed hawk, northern harrier, and white-tailed kite. Numerous seasonal wetlands within the Berkeley Meadow also provide valuable wildlife habitat. These areas are important for Pacific tree frog, garter snake, mallard, great blue heron, great egret, and insects such as dragonflies and damselflies (LSA Associates, 2001).

In addition to the numerous wildlife species that utilize the habitats within the project site, a number of special-status species are either known to occur or could potentially be present. Special-status wildlife species that have been documented in Eastshore SP, and their potential to occur in the project area, are described below.

California brown pelican *(Pelecanus occidentalis californicus)* – California brown pelican, a federal and State endangered species, is known to forage in the shallow subtidal portions of Eastshore SP (LSA Associates, 2001). This species has been observed foraging in North Basin, directly north of the project site. Although this species is present at times near the project site, no brown pelican foraging, roosting, or nesting habitat is within the project area.

White-tailed kite *(Elanus leucurus)* - The white-tailed kite, a California Species of Special Concern and Fully Protected Species, is typically found in coastal and valley lowlands, and nests near the top of dense oak, willow, or other tree stands. White-tailed kites are consistently observed roosting and hunting in the Meadow.

Northern harrier *(Circus cyaneus)* - Northern harriers, a California Species of Special Concern, are documented residents of the Meadow, nesting and foraging in the ruderal grassland and scrub habitats. A pair of harriers has nested in the northern and middle area of the Meadow since 1994 (CDFG, 2003), and can regularly be seen hunting there as well.

Sharp-shinned hawk *(Accipiter striatus);* **Cooper's hawk** *(Accipiter cooperi);* **Merlin** *(Falco columbarius)* (wintering) – These birds are California Species of Special Concern and there is potential foraging habitat for all species in the project area. Sharp-shinned hawks have been recorded during winter in the project area. Cooper's hawks could also be present occasionally in the Meadow. The Merlin has been recorded in the project area during winter, but does not nest in California. These species do not nest and only occasionally forage in the project area.

American peregrine falcon *(Falco peregrinus)* - Peregrine falcons, which are State Endangered and protected, are known to occur in the East Bay. This species is generally found near bodies of water, in open areas that have cliffs and canyons nearby for cover and nesting (Zeiner et al., 1990). Peregrine falcons may fly over the project area at times, but no suitable cliff-nesting habitat is present in or near the project area.

California black rail *(Laterallus jamaicensis coturniculus)* - The California black rail, a State Threatened species, mainly inhabits tidal salt marshes bordering large bays, but can also be found in freshwater and brackish marshes (CDFG, 2003). This species is present in tidal marsh habitat within Eastshore SP, such as the Emeryville Crescent Marsh. However, suitable habitat for the black rail is not present in the Berkeley Meadow or Brickyard areas; therefore, it is highly unlikely that this species inhabits the project area.

California clapper rail *(Rallus longirostris obsoletus)* - The California clapper rail, a State and Federally Endangered species, is present in some of the salt marsh habitat within Eastshore SP, including the Emeryville Crescent Marsh, a little over a mile south of the project area. This species is found in salt water and brackish marshes traversed by tidal sloughs, and is associated with abundant growths of pickleweed (CDFG, 2003). Suitable marsh habitat for this species does not exist in the vicinity of the project area, so it is highly unlikely that this species inhabits the site.

California least tern *(Sterna antillarum browni)* – The Federally and State Endangered California least tern is known to forage in the waters of the North Basin, just north of Berkeley Meadow, but does not forage within the project area. It also does not nest in the vicinity of the site. The CNDDB lists the closest nesting colony at the Alameda Naval Air Station, southwest of Oakland.

Burrowing owl (*Athene cunicularia*) - The burrowing owl is a California Species of Special Concern and could potentially occur in the Berkeley Meadow area. This owl roosts and nests

in old burrows of ground squirrels and other small mammals, in open, dry grassland and desert habitats (Zeiner et al., 1990). Burrowing owls have been recorded recently at the Albany Bulb, along the North Basin Strip, along the south shoreline of the North Basin (in riprap), and south of University Avenue (west of the Strawberry Creek outfall).

Short-eared owl *(Asio flammeus)* – The short-eared owl is a California Species of Special Concern, for which suitable open foraging and nesting habitat occurs in the ruderal grassland habitat of the Meadow. This species has been reported at the Hoffman Marsh, over a mile north of the project site (LSA Associates, 2001), but has not been recorded at the Meadow.

California horned lark *(Eremophila alpestris actia)* - The grassland habitats of the project area may provide suitable habitat for the California horned lark, a California Species of Special Concern. This ground-dwelling bird is found in a variety of open habitats, usually where trees and large shrubs are absent (Zeiner et al., 1990).

Loggerhead shrike *(Lanius ludovicianus)* - The ruderal grassland and scrub habitats of the Berkeley Meadow provide habitat for this species, with blackberry bushes in the area providing suitable perching and prey-skewering sites. The loggerhead shrike, a California Species of Special Concern, has been documented in recent years in the project area, and could potentially nest onsite.

Saltmarsh common yellowthroat *(Geothlypis trichas sinuosa)* – The saltmarsh common yellowthroat, a California Species of Special Concern, has been reported at both the Emeryville Crescent Marsh and Hoffman Marsh, and may be present in other tidal marsh and scrub habitats within Eastshore SP (LSA Associates, 2001). This species has not been recorded in the project area, but could potentially nest in the ruderal scrub habitat in the Berkeley Meadow.

Alameda song sparrow *(Melospiza melodia pusillula)* – This California Species of Special Concern has been found in the Emeryville Crescent Marsh and may occur in other marsh and adjacent habitats within Eastshore SP (LSA Associates, 2001), including the proposed project area.

Salt-marsh wandering shrew *(Sorex vagrans halicoetes)* – This California Species of Special Concern could potentially occur in transitional habitat adjacent to tidal and nontidal salt marsh within Eastshore SP (LSA Associates, 2001), but has not been recorded within park boundaries. Suitable habitat for this species does not occur in the project area, as it is not adjacent to salt marsh. Therefore, it is highly unlikely this species inhabits the site.

Salt-marsh harvest mouse *(Reithrodontomys raviventris)* – The CNDDB lists this Federal and State Endangered species as occurring in numerous salt marshes along the San Francisco Bay, including the Emeryville Crescent Marsh within Eastshore SP. This species is found only in pickleweed marshes. No habitat for this species occurs in the vicinity of the project area, so it is highly unlikely that the salt-marsh harvest mouse inhabits the site.

Monarch butterfly *(Danaus plexippus)* - The CNDDB lists a few monarch roost sites within the Richmond quad; however, none of these occur within Eastshore SP. Monarch winter roosts

are located in wind-protected tree groves (CDFG, 2003), often with eucalyptus and Monterey pine trees. The Berkeley Meadow is very exposed to wind, with no dense, protected groves of trees to provide suitable roosting habitat for this species. None of the roost sites identified in the CNDDB are near the project area; therefore, it is highly unlikely that monarch butterflies inhabit the site.

SENSITIVE NATURAL COMMUNITIES

Sensitive natural plant communities are communities that are especially diverse, regionally uncommon, or of special concern to local, state, and federal agencies. Elimination or substantial degradation of these communities would constitute a significant impact under CEQA. Three sensitive natural plant communities (equivalent to vegetation series as defined by Sawyer and Keeler-Wolf, 1995) are reported to occur in the Oakland West and Richmond quadrangles by the CNDDB. These are Northern Coastal Salt Marsh, Northern Maritime Chaparral, and Valley Needlegrass. None of these communities exist in the project area or adjacent locations.

Two other sensitive natural communities, Pickleweed Series and Bulrush-Cattail Series, occur in the eastern portion of the Brickyard. These are equivalent to the Common Pickleweed and Brackish Bulrush-Cattail plant communities described by the CNDDB.

WETLANDS AND WATERS OF THE UNITED STATES

The U.S. Army Corps of Engineers (USACE) defines wetlands as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The majority of USACE jurisdictional wetlands meet three wetland delineation criteria: (1) hydrophytic vegetation, (2) hydric soil types, and (3) wetland hydrology. A report detailing the delineation of waters of the United States for the Berkeley Meadow site was prepared by LSA Associates, Inc. (1998). The objective of the delineation was to identify wetlands and other waters on the Meadow property that are potentially subject to USACE jurisdiction. LSA identified 26 potential jurisdictional seasonal nontidal wetlands on the property that total 8.72 acres.

At least a portion of the Pickleweed Series and Bulrush-Cattail Series vegetation in the Brickyard probably meet USACE wetland criteria. These areas have not been formally delineated.

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

DISCUSSION

a) (i) As noted in the Environmental Setting above, there are a number of sensitive native wildlife species and/or habitats that could exist within the proposed project location. Implementation of the activities associated with this project could result in a significant cumulative impact to one or more of these species or habitats. The following mitigation measures, in conjunction with Mitigation Measure GEO-3, would reduce any potential impacts to a less than significant level.

MITIGATION MEASURE BIO-1 GENERAL WILDLIFE PROTECTION

- A DPR-qualified biologist or resource ecologist would conduct a training session for all project personnel, prior to the start of construction, instructing them in ways to identify sensitive species and measures required to avoid or protect these species. Training would be completed prior to authorizing personnel to work in the project area.
- The contractor, site supervisor, and project manager would meet with the DPR project resource ecologist to identify all access routes, size and location of staging areas, and boundaries of each activity prior to the start of construction. All activity and equipment would be kept within designated staging and work areas, unless approved in advance by the project resource ecologist.

MITIGATION MEASURE BIO-1, CONT. GENERAL WILDLIFE PROTECTION
• Outside lighting for the new modular office in the Brickyard Cove would be shielded or installed in a manner or location that would not direct light towards bird habitat in the nearby cove. • Bird stickers would be installed on the windows of the new modular office to deter birds from flying into the windows. • Animal-proof trash receptacles would be installed to ensure that wildlife populations (especially predators, such as raccoons, skunks, opossum, feral cats, and rats) do not increase due to an artificially increased supply of food.

(ii) The northern harrier is known to nest and forage in the Berkeley Meadow. Implementation of activities associated with the proposed project could result in a significant impact to harriers or their habitat. The following mitigation measures would reduce any potentially adverse impacts to a less than significant level.

MITIGATION MEASURE BIO-2 NORTHERN HARRIER
• Project manager(s)/designer(s) would work with the project resource ecologist to incorporate known northern harrier nesting sites into the design of the central preserve area of Berkeley Meadow, to the extent feasible. Trails would be located away from known nesting sites. • Project activities that could impact northern harriers would be scheduled during the nonbreeding season (November through March), to the extent feasible. If construction must be scheduled during the breeding season, surveys would be conducted immediately prior to the start of work to locate nests. Active nest sites would be protected from disturbance by buffers of up to 500 feet. The buffer distance may be modified by the DPR-qualified project resource ecologist, based on variables such as season, topography, nature of construction activity, and observed bird behaviors. All operations would be excluded from these buffer areas until the young have fledged from their nests.

(iii) Sensitive bird species, such as the white-tailed kite and loggerhead shrike, could be present in the project area, and may be nesting in the vicinity. Raptors and their nests are protected under the Fish and Game Code (Section 3503.5). The horned lark, saltmarsh common yellowthroat, and Alameda song sparrow could also potentially be present in the project area, and, if nesting there, may be affected by proposed project activities. The following mitigation measures will prevent the disturbance or loss of an active nest, and reduce potential impacts to sensitive bird species to less than significant.

MITIGATION MEASURE BIO-3 SENSITIVE BIRD SPECIES
• If construction is scheduled during the breeding season, surveys would be conducted to locate nests, prior to the start of work. Active nest sites would be protected from disturbance by buffers of up to 500 feet. The buffer distance may be modified by the DPR-qualified project resource ecologist, based on variables such as season, topography, nature of construction activity, and observed bird behaviors. All operations would be excluded from these buffer areas until the young have fledged from their nests.

(iv) Burrowing owls have been recorded in the Meadow area, but have not been seen in the project area in recent years. However, they could potentially occur there during certain times of the year. Short-eared owls have not been seen in the project area, but suitable nesting habitat occurs in the grassland onsite. The following mitigation measures will reduce potential impacts to short-eared owls and burrowing owls to less than significant.

MITIGATION MEASURE BIO-4 SHORT-EARED OWLS AND BURROWING OWLS

- Construction areas will be surveyed for short-eared owls and burrowing owls by a DPR-qualified biologist or resource ecologist, prior to the start of work.
- If short-eared owls or burrowing owls are found breeding in the project area, the active nests will be protected from disturbance by 500-foot buffers during the breeding season (March – July for short-eared owl; February – August for burrowing owl).
- Burrowing owls may be passively relocated during the nonbreeding season (September - January), if deemed advisable by the qualified biologist after consultation with the California Department of Fish and Game. Passive relocation would be accomplished through use of a one-way door, installed at the burrow entrance for a minimum of 48 hours. After 48 hours, the door will be removed, and the burrow collapsed. An artificial burrow will be installed in an appropriate area within the project site as replacement for the collapsed burrow.

(v) There are ten CNPS List 1B or List 2 species that have reported occurrences within the Richmond and Oakland West USGS 7.5-minute quadrangles. These are the bent-flowered fiddleneck, Diablo helianthella, fragrant fritillary, pallid manzanita, robust spineflower, round-leaved filaree, saline clover, San Francisco spineflower, Santa Cruz tarplant, and western leatherwood. Pallid manzanita and Santa Cruz tarplant have State Endangered and Federal Threatened listing status. Robust spineflower has a Federal Endangered listing status. The known occurrences in Alameda County for Santa Cruz tarplant and robust spineflower are reported as extirpated by the CNPS.

Although the likelihood of occurrence in the project area for any of the ten species mentioned above is minimal, marginal habitat may exist there. Accordingly, preconstruction surveys would be conducted during the appropriate blooming months (or when species can be unmistakably identified) for all CNPS List 1B and List 2 plant species that could potentially occur within the project area. Any occurrences of these species found within the project area would be mapped on project maps, flagged on the ground, and avoided. Less than significant impact.

(b) There are no sensitive natural plant communities occurring within the Berkeley Meadow, as identified by the California Department of Fish and Game. Native arroyo willow occurs in or adjacent to a few of the seasonal wetlands, and these stands constitute riparian habitat that is recognized as valuable for numerous wildlife species. Also important to bird species are scattered coyote brush, especially on the north side of Meadow. Within the eastern portion of the Brickyard are two sensitive natural plant communities, Pickleweed Series and Bulrush-Cattail Series. A small stand of arroyo willow occupies the fringes of the Bulrush-Cattail community, which is an area of limited, but important, wildlife habitat.

However, the areas containing these sensitive communities do not occur within the proposed project site and would not be affected by any construction activities.

Areas within the project site that contain native plants would be preserved to the fullest extent possible, in accordance with the Vegetation Management Plan (Appendix B). Locations identified by surveys or other documentation as providing important wildlife habitat would receive special protection efforts.

c) A total of 8.72 acres of seasonal wetlands, composed of mostly nonnative plant species, have been formally delineated within Berkeley Meadow. The proposed project would provide for seasonal wetland enhancement and protection through removal of exotic plant species and revegetation with native wetland species, as detailed in the attached Vegetation Management Plan. No filling or dredging of these seasonal wetlands, and no placement of any structures in wetland areas, would be included as part of this project. Hence, the work would not be considered an "activity" that would be regulated by the USACE. The wetland areas in the eastern portion of the Brickyard are not within or closely adjacent to any proposed construction activities. No impact.

d) The fencing that would be installed as part of this project has the potential to restrict wildlife movement into and out of the Berkeley Meadow. Although there are no sensitive wildlife species that would be impacted, some more common native species, such as skunks and raccoons, could have their movement restricted by the perimeter fence. The fence will be of either 4" mesh or of a design approved by the Department of Fish and Game. Some feral animals, which prey on ground-nesting birds and other sensitive species within the project site, would also be excluded, resulting in a positive effect on native wildlife. Restriction of access into the interior of the Meadow area would not substantially interfere with the movement or breeding activities of native species throughout the surrounding local area. Less than significant impact.

e,f) This project does not conflict with any local ordinances, adopted conservation plans, or policies. No impact.

V. CULTURAL RESOURCES.

ENVIRONMENTAL SETTING

Eastshore SP consists of an estimated eight-and-a-half miles of bayfront property on the east-central shoreline of San Francisco Bay. Most of the park is aquatic, as nearly 1,800 of a total of 2,262 acres are submerged. The proposed project area sits on an artificial peninsula of refuse and soil and is comprised of two separate but adjacent segments. Both segments have similar histories and are identified as the Brickyard and the Berkeley Meadow. The proposed Area of Potential Effect (APE) encompasses a total of approximately 105 acres of human-made high ground in Alameda County and is located in Township 5 North, Range 1 East of the 7.5' series USGS Oakland West topographic quadrangle (location is approximate). (See Appendix A for project site maps.)

The entire land base of the proposed project area was created in the mid–20th century when much bayfront property was used as municipal landfills. The APE lies outboard (west) of Interstate Highway 80/580, which was constructed on fill materials that were deposited between the late 1920s and late 1930s. The Brickyard landfill was created between the early 1950s and early 1960s and is composed of demolition debris, such as concrete, lumber, bricks, and rebar. Such materials were dumped directly into the bay and were probably generated during construction of the surrounding communities. At present, the Brickyard landfill is geographically characterized as a low-elevation cap, with much debris buried close to the surface. Geotechnical bore logs indicate that the surface level of the Brickyard sits approximately 12 feet above a natural layer of sandy-clay silt, identified as Young Bay Mud. Much of the Brickyard is currently used as a "put-and-take" site for the temporary storage of fill materials, such as soil, rock, and sand.

Materials in the Berkeley Meadow landfill largely consist of domestic waste that is also assumed to come from surrounding communities. These materials were deposited from the early 1920s to the early 1980s, when municipal dumping ceased in the immediate area. The Meadow was created with a sanitary landfill technique described as "fill and cover." This method was primarily designed to control insect infestations and reduce the stench of rotting garbage. It involved a daily capping of waste with a layer of clean soil. The Meadow also contains the remains of two pier and wharf structures that were used for dumping refuse and accessing the Berkeley Yacht Harbor. At present, the human-made landscape of the Berkeley Meadow is best characterized as a low-elevation cap that is partially covered with coastal wetland shrubs and grasses. The depth of the Meadow landfill is comparable to the Brickyard as it also caps the natural layer of Young Bay Mud with an approximately 12-foot layer of refuse.

A consequence of early urbanization in the San Francisco Bay Area was the destruction of much of the region’s prehistoric remains before such data could be formally recorded. Data from several archaeological sites in the vicinity of the proposed APE indicate that human inhabitation dates back nearly 2,500 years to an early prehistoric period classified as the Early Horizon. Such data also indicate that the sea level has fluctuated over time and that 2,000 years ago it was approximately 75 centimeters lower than today. The surrounding area was populated by Costanoan people during the late prehistoric period, or Late Horizon.

Contemporary archaeologists consider dry lands near coastal marshes as favored ground for settlement by aboriginal groups before European contact. Costanoan populations suffered a series of events that had cataclysmic effects on their culture, beginning with the Spanish Mission Period of the late 18th century. Mission records indicate that by 1810, there were no Costanoan people still living their aboriginal existence. There is no recorded evidence of either Early or Late Horizon prehistoric materials in the proposed APE.

Waste materials contained in the landfill of the project site are largely functional for a general or broad-spectrum study of history as they most likely relate to a larger geographical context and are not indicative of any onsite pattern of human behavior beyond the creation of the landfills themselves. With this perspective, the qualities of historical significance of the landfills are twofold. They provide an insight into the values that past populations placed on bayfront properties, and, considering their geographical footprints, provide a basis to calculate rates of speed and spread that municipal dumps encroached on bay waters during the 20th century. Although not substantiated with direct evidence, there also is potential for prehistoric and early historic (prelandfill) archaeological data to be contained below landfill materials and within the natural underlayer of Young Bay Mud.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

DISCUSSION

a) The historic significance of the project locations is limited to the geographical footprints of the landfills, with no other important structures, features, or artifacts. The extent of the work proposed as part of this project would not be extensive enough to alter the footprints or overall appearance of the landfill contours. Less than significant impact.

b) Ground disturbance from this proposed project includes low intensity landscape treatments at the Berkeley Meadow, with excavations generally limited to a depth of one foot. Proposed project work at the Brickyard is comparatively more intensive, as it entails installing a modular administrative office building directly on the surface of the ground and constructing an ADA-compliant parking area that will accommodate up to eight vehicles. Additional work associated with the modular building includes installing water, sewer, and electrical utilities in 36-inch deep trench lines. However, all potentially intact prehistoric archeological resources in the proposed APE are buried at a depth of 12 feet or greater in

the strata of Young Bay Mud and thus are well below excavations associated with the proposed landscape treatment and construction activities. No impact.

c) There are no cultural records on file indicating the existence of historic or prehistoric human remains in the proposed APE. The presence of human remains in the proposed project area also would be highly inconsistent with the function of the landfills as defined by historic research. Although there is a possibility that prehistoric and early historic (pre-landfill) human remains could be contained in the natural strata of Young Bay Mud, the potential for long-term preservation of these organic materials is low, considering that inundation by bay waters in the period before the landfills were created most likely promoted the decay of any such remains. Additionally, all ground-disturbing activities associated with this project would be limited to the landfill layers. No impact.

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VI. GEOLOGY AND SOILS.

ENVIRONMENTAL SETTING

Location and Topography

The Berkeley Meadow and Brickyard project areas are located along the east shore of San Francisco Bay, within the City of Berkeley in Alameda County. (See Appendix A for project site maps.) The project area has gentle topography (see Figure 4, Appendix A), with elevations ranging from zero to approximately 15 feet above mean sea level (MSL).

Site Geology

The project site is located in the California Coast Range Geomorphic Province, a northwest-trending chain of mountains and valleys that formed mostly due to movement along the San Andreas Fault and associated faults. The majority of the project site consists primarily of artificial fill, including municipal waste and construction debris, placed to the west of the historic shoreline (see Figure 7, Appendix A). The land filling has extended the shoreline as much as 1,000 feet into the Bay, from its original (1850s) position (Radbruch, 1957 in DPR, 2002a). In soil borings drilled by Erler & Kalinowski, Inc. (1998), the fill soils are described as silty clay, silt, sandy silt, or silty sand. Interspersed debris is described as wood fragments, glass fragments, broken bottles, concrete, paper, metal, and wire. These borings were all drilled to a total depth of 13 feet below grade. The contact between the base of the fill and top of native material (Young Bay Mud) was interpreted at 10.5 to 11.5 feet below grade.

The artificial fill is underlain by a variable thickness of soft, compressible Young Bay Mud (clayey to sandy silt), which is, in turn, underlain by Pleistocene to Recent Merritt Sand (silty to clayey fine sand). The next oldest formation is the Pleistocene Alameda Formation, consisting of continental and marine sediments. Beneath the project site, Franciscan Bedrock lies approximately 300 feet below sea level. East of the site, the historic shoreline is mapped by Radbruch (1957, in DPR, 2002a) as alluvial fan deposits of the Temescal Formation, comprising interfingering lenses of clayey gravel, sandy silty clay, and sand-clay-silt mixtures. A geologic map of the site vicinity by Wagner et al. (1991, in DPR 2002a) is presented in Figure 5, Appendix A.

Seismicity

The project area is located within the seismically active San Francisco Bay region. Several major, active faults of the San Andreas system, capable of generating large earthquakes, surround the project area (see Figure 6, Appendix A), although no known active faults have been identified as underlying the site (Jennings, 1994). The nearest fault is the Hayward Fault, located approximately three miles to the east. The San Andreas Fault lies 14 miles southwest and the Rodgers Creek Fault (a possible northern extension of the Hayward Fault) is located approximately 18 miles northeast of the project site (DPR, 2002b). The Maximum Credible Earthquakes for the Hayward, San Andreas, and Rodgers Creek faults are 7.5, 8.3, and 7.2 (Richter magnitude) respectively (DPR, 2002b). The project site is likely to experience a major earthquake during the project's life span. The Working Group on California Earthquake Probabilities released a report in 2002 that concludes the Bay Area faces a 67% probability of a magnitude 6.7 or larger earthquake occurring in the next 30 years (Berkeley Seismological Laboratory, 2003). A large earthquake will subject the project site to strong ground shaking and possible liquefaction and settlement.

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable, as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems, where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒

DISCUSSION

a) The chance of the rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure is certainly possible in this area. This project would not substantially increase the exposure of people or structures to risk of loss, injury, or death as a result of these events, provided all structures (temporary or permanent) are constructed following the proper Uniform Building Code/California Building Code guidelines for Seismic Zone 4.

i) The project site is not located on an active fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning (APEFZ) Map from the California Geological Survey. While there is always a possibility that an unknown fault underlies the site, no

APEFZ faults have been identified near the site; the risk from surface fault rupture is considered to be less than significant.

ii) The California Geological Survey has determined that the Hayward Fault Zone is capable of generating an earthquake with a Maximum Moment Magnitude of 7.5. The San Andreas Fault Zone is capable of generating an earthquake with a Maximum Moment Magnitude of 8.3 and the Rodgers Creek Fault could generate an earthquake as large as 7.2. The Seismic Shaking Hazard Map (Petersen, 1999) shows that the project site lies within a zone that has a 10% probability of experiencing moderate to strong shaking on the order of 0.7g to 0.9g (acceleration due to gravity) within 50 years. Maps available from ABAG (ABAG, 2003) indicate the project site would be subjected to violent shaking (Modified Mercalli Intensity IX), based on earthquake scenarios for the Rodgers Creek (6.5 Richter magnitude), South Hayward Fault (magnitude 6.7), and San Andreas Fault (magnitude 7.9). However, implementation of Mitigation Measure GEO-1 below would reduce any potential impacts to a less than significant level.

Seismic-induced ground failure, such as liquefaction, usually occurs in unconsolidated granular soils that are water saturated. During seismic-induced ground shaking, pore water pressure can increase in loose soils, causing the soils to change from a solid to a liquid state (liquefaction). The upper soils in the project area are unconsolidated artificial fill, containing municipal garbage and construction debris. The groundwater is shallow, ranging in elevation from 4.8 to 6.0 feet MSL at the Berkeley Meadow and from -1.5 to 7.0 feet MSL at the Brickyard. The California Geological Survey (CGS) Seismic Hazard Zone Map of the Oakland West Quadrangle (2003) shows the subject site as an area where historical occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacement, such that mitigation as defined in the Public Resources Code Section 2693(c) would be required. Implementation of Mitigation Measure GEO-2 below would reduce this potential risk of liquefaction to less than significant.

Settlement also occurs during seismic-induced ground shaking of loose granular soils above the water table. Settlement was observed after the 1989 Loma Prieta earthquake, along the nearby Emeryville Crescent and in Cesar E. Chavez Park (Seed, et al., 1990, in DPR, 2002a). While the 1990 Seed report did not indicate any seismic-induced ground effects at the Berkeley Meadow or Brickyard site, the potential exists for such failures in the future during an earthquake on a nearby fault. The CGS Seismic Hazard Zone Maps (CGS, 2003) state that the project area would require mitigation as defined in the Public Resources Code Section 2693(c), which states: "*'Mitigation'" means those measures that are consistent with established practice and that will reduce seismic risk to acceptable levels."* Implementation of Mitigation Measure GEO-2 would reduce this potential risk to less than significant for liquefaction and settlement.

No known landslides have occurred or have been mapped at the proposed project site. The topography is relatively gentle and this area would not be prone to landsliding.

MITIGATION MEASURE GEO-1
• Due to the location in a high seismic hazard zone, the proposed office building structure and foundation would conform to the earthquake design requirements in Chapter 16, Division IV of the most recent accepted edition of the California Building Code (CBC). The design criteria will be for Seismic Zone 4, with a soil type of S_E or S_F as indicated in Table 16-J, of the 2001 CBC. Soil type S_E is indicated since the available Standard Penetration Data indicates blow counts less than 15. Soil type SF has been indicated as the engineer may require site-specific evaluation for building construction.

MITIGATION MEASURE GEO-2
• The placement and compaction of fill for the building foundation, use of mat foundations, and/or piles supporting the building would be integrated into the final design criteria, as necessary, for any structure constructed on the site, in conjunction with the requirements of GEO-1 above.

b) A temporary increase in erosion may occur during the excavation and grading for the building site, associated parking area, and utility trench excavations. Topography may be changed due to addition of fill material to cap and level the site. With the implementation of Mitigation Measure GEO-3, any contribution to substantial soil erosion or loss of topsoil by the proposed project would be reduced to a less than significant level.

MITIGATION MEASURE GEO-3
• A Storm Water Pollution Prevention Plan (SWPPP) would be prepared, as required by the State Water Resources Control Board for projects involving greater than one acre of land disturbance. The SWPPP would include DPR, NPDES, and/or San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Best Management Practices (BMPs) to be used at the Berkeley Meadow and Brickyard project sites to control soil and surface water runoff during excavation, filling, trenching, and grading. • If ground-disturbing operations must occur during the rainy season (October 31 to May 1), or if storms are anticipated during construction, "winterizing" will occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil. • Temporary erosion control measures (BMPs) would be used during all soil-disturbing activities and until all disturbed soil has been stabilized (recompacted, revegetated, etc.). This would include, but not be limited to, the use of silt fences, straw bales, or straw or rice coir rolls, to prevent soil loss and siltation into nearby surface water and San Francisco Bay. • Permanent erosion controls would be implemented, including proper compaction and revegetation of disturbed soil areas, as soon as feasible following construction. The State's contractor would be responsible for providing the planned BMPs for DPR review and approval, prior to the start of work. Site drainage would be directed to nearby storm drains as indicated in the SWPPP. • The project would adhere to all local building and engineering regulations and ordinances set forth by Alameda County, BCDC, and the City of Berkeley.

c) The project is potentially located on a soil unit that may be subject to liquefaction and settlement during an earthquake, as indicated in Discussion (a)(iii) above. Implementation of Mitigation Measure GEO-2 above would reduce any potential impacts to a less than significant level.

d) Expansive soils are not known to exist at the project site; therefore, there is no impact.

e) The project does not involve the installation of a septic system and/or leach field. There would be no impact to site soils.

f) No unique paleontological resource or geologic features are present at the project site. The project site contains human-made artificial fill and municipal and construction refuse to a total depth of approximately 12 feet below grade. Any paleontological resources in the underlying natural material (Young Bay Mud) will not be disturbed as a result of this project. Therefore, no impact.

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VII. HAZARDS AND HAZARDOUS MATERIALS.

ENVIRONMENTAL SETTING

Eastshore SP extends approximately 8.5 miles along the eastern shoreline of San Francisco Bay from the San Francisco-Oakland Bay Bridge north to the Marina Bay neighborhood in the City of Richmond. The park includes approximately 2,262 acres of uplands and tidelands along the waterfronts of the cities of Oakland, Emeryville, Berkeley, Albany, and Richmond. The project site is bound by San Francisco Bay to the west and I80/580, residential, commercial, and industrial areas to the east. The proposed project would occur within the Berkeley Meadow and Brickyard areas of the park, located entirely within the Berkeley city limits. (See Appendix A for project site maps.)

Landfill History

The area now occupied by the Berkeley Meadow and Brickyard properties was once part of San Francisco Bay. In the mid-1800s, the shoreline was located east of the existing I80 freeway, at a location between Eastshore Highway and 2nd Street (CHNMB Associates, 1981). In 1908, the City of Berkeley operated a garbage incinerator at Fleming Point. By 1923 Berkeley residents had had their fill of the smell and the cost of operating the incinerator and approved a plan to bury their garbage in a "fill and cover" landfill (LSA, et al., 2001). Both sites were filled from the 1930s to the 1960s; Berkeley Meadow was filled using construction debris and municipal waste, while the Brickyard received mostly construction debris and riprap (RWQCB, 1998). Since there were no restrictions on the type of waste allowed, potentially hazardous substances were disposed of along with the municipal garbage and inert construction debris.

According to historic aerial photos (ERM and Erler & Kalinowski, 1998), the eastern half of the Berkeley Meadow was mostly filled by 1953 and the western limit of the Brickyard was defined by a roadway or pier structure. By 1957, the Brickyard was mostly infilled, and by 1966, the remainder of the Berkeley Meadow was filled, and landfilling was now occurring in the area of the current Cesar E. Chavez Park. Filling along the East Bay shoreline finally ceased in the 1980s. (See Figure 7, Appendix A, for map of historic and current shorelines.)

Berkeley Meadow Site-Specific Information

Sampling at the property included about 187 soil samples and 34 groundwater grab samples (RWQCB, 1998). Chemicals of Potential Concern (COPCs) in soil identified during site assessment activities included metals (lead, arsenic, mercury, copper, chromium, and zinc), TRPH[4], TPHg, TPHd and components (benzene, xylene), and benzo(a)pyrene[5]. Groundwater COPCs included low levels of metals (nickel, mercury, lead, and zinc), elevated levels of TPH (gasoline and diesel) and volatile gasoline components benzene, toluene, ethylbenzene, and

[4] TRPH: Total Recoverable Petroleum Hydrocarbons – includes all hydrocarbons including oil and grease, gasoline (TPHg), and diesel (TPHd).

[5] Benzo(a)pyrene (BAP) is a polycyclic aromatic hydrocarbon with a chemical formula of $C_{20}H_{12}$. BAP is not produced or used commercially, but results from the incomplete combustion of organic materials. BAP is found in gasoline and diesel engine exhaust, emissions from coal-, oil-, and wood-burning stoves and furnaces, cigarette smoke, industrial smoke and soot, incinerators, asphalt-processing, and cooked foods, especially charcoal broiled. Short-term exposure to BAP can result in red blood cell damage, anemia, and immune-system suppression. Long-term exposure can result in developmental and reproductive effects, and cancer (USEPA, 2003).

toluene (ERM and Erler & Kalinowski, 1998). COPCs in soil gas samples included methane, methylene chloride, chloroform, vinyl chloride, benzene, toluene, PCE[6], and 1,1,1 TCA[7] (Tetra Tech, 1995).

A magnetometer survey conducted by Tetra Tech (1995) at the Berkeley Meadow detected moderate to high densities of magnetic anomalies in one-third of the site, mostly concentrated in the north-central area of the Meadow. There was also significant slag material and kiln brick present at the surface. One kiln brick sample and a composited slag sample were analyzed for Title 22 metals. The slag was composed of iron with manganese, sodium, and titanium accessory metals. The slag also contained total chromium (and possibly some chromium VI) and levels of copper and nickel above the action levels for ecological receptors. Selenium was just under the action level (Tetra Tech, 1995). The material did not contain metals above the Total Threshold Limit Concentration criteria (1,000 mg/kg), one of the criteria used to classify a material as hazardous (LSA, et al., 2002).

Brickyard Site-Specific Information

Sampling at the Brickyard property included about 44 soil samples and 8 groundwater grab samples (RWQCB, 1998). Chemicals of Potential Concern (COPCs) in soil identified during site assessment activities included metals (lead, arsenic, chromium, and zinc), TRPH, TPHd, TPHg, and volatile components (toluene and xylene). Groundwater COPCs included low levels of metals (nickel and lead), TRPH, TPHg, and volatile gasoline components benzene and toluene (ERM and Erler & Kalinowski, 1998). COPCs in soil gas samples included methane, methylene chloride, chloroform, vinyl chloride, benzene, toluene, PCE, and 1,1,1 TCA (Tetra Tech, 1995).

Remediation Actions: Based on analytical results and the findings of the Remediation and Risk Management Plan (ERM and Erler & Kalinowski, 1998), SFRWQCB required soil remediation for lead and benzo(a)pyrene concentrations at three locations in the Berkeley Meadow, where surficial soil concentrations of those analytes were above Regional Park Preliminary Remediation Goals (PRGs). Approximately 210 cubic yards of soil were disposed of offsite as Class I and II waste from these three areas; the resulting excavation was backfilled and capped with two feet of clean fill (gravel) (ERM, 1998). No remediation was required for the Brickyard site.

The three remediation areas may not be the only areas where contaminants are above the PRGs. The nature of the site and the variable types and placement of wastes makes it difficult to conclusively identify every “hot spot," since every square foot of soil has not been sampled. Therefore, any future work at the site may uncover additional areas where chemical levels are above the PRGs.

Regulatory Status*:* The SFRWQCB is designated as the lead agency for this project on matters related to hazardous waste. The SFRWQCB issued a Certificate of Completion (COC) in 1998, stating that the site investigation and remedial action at the site had been accomplished. The COC is subject to the conditions in the RWQCB Site Cleanup Requirements set forth in

[6] PCE: Perchloroethene (aka Tetrachloroethene, PERC) is a human-made chlorinated solvent used in dry cleaning, degeasing of metal parts, glues, and other applications. It is a suspected human carcinogen.
[7] 1,1,1-TCA is a human-made chlorinated solvent used in dry cleaning, degreasing of metal parts, and other applications. Not considered a carcinogen based on available data.

Order 98-072. This order states that DPR/EBRPD will implement the May 1998 Remediation and Risk Management Plan (RRMP) by ERM and Erler & Kalinowski (1998). This RRMP describes procedures for future work by park personnel at Eastshore SP and are addressed in the discussion below.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	☐	☐	☒	☐
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

DISCUSSION

a) Geotechnical investigations (borings and backhoe trenching) and construction activities (grading and trenching for utilities) may require the use of potentially hazardous materials such as fuels, oils, and solvents. These materials are used for generators, excavation equipment, and other vehicles and would be present in containers engineered for safe storage. Large quantities would not be stored at the construction site. Spills, upsets, or other construction-related accidents could result in a release of fuels or other hazardous materials into the environment. Mitigation Measure HAZMAT-1 would reduce the potential impacts from these substances to less than significant.

MITIGATION MEASURE HAZMAT-1

- A Spill Prevention and Response Plan (SPR Plan) would be developed and approved by the DPR project manager prior to the start of any work. This plan would provide guidelines for safe work practices to prevent any hazards to the public, workers, or the environment from the release of hazardous materials (fuels, oils, or other vehicle fluids). It would also include a map delineating construction staging or storage areas where refueling, lubrication, and maintenance of equipment may occur. A spill kit would be maintained onsite throughout the duration of the project. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to Eastshore SP during construction, the contractor would immediately notify the appropriate DPR staff (e.g., project manager, supervisor, or State Representative).
- All equipment would be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises.
- Equipment would be cleaned and repaired (other than emergency repairs) outside the park boundaries. All contaminated water, soil, sludge, spill residue, or other hazardous compounds would be disposed of outside park boundaries, at a lawfully permitted or authorized designation.

The potential for exposure of workers to hazardous or dangerous substances may occur during removal of exotic vegetation, from both application of herbicides and contaminants potentially present in the onsite soils. In addition to hazardous materials present on the site, due to its history, there is a potential for infectious wastes from uncontrolled use of the property by homeless persons and other members of the public. RWQCB Order 98-072 states that the May 1998 Remediation and Risk Management Plan (RRMP) will be implemented during future work by contractors or park personnel at Eastshore SP. Development of a Site Health and Safety Plan is also required as part of the RRMP. Development and implementation of this Health and Safety Plan, as indicated in Mitigation Measure HAZMAT-2 below, would reduce any potential impacts to workers on the site to a less than significant level.

MITIGATION MEASURE HAZMAT-2

- A Health and Safety Plan would be developed and approved by the project manager, prior to the start of any work. This plan will provide guidelines for safe work practices to prevent any hazards to the public, workers, or the environment from the release of hazardous materials or waste (chemical and biological). Some specific items to be included are bulleted below:
  - ❖ Procedures for storage, transport, and disposal of any hazardous waste generated as part of this project. This would include any excavated soils or landfill wastes, and any herbicide residue or containers.

MITIGATION MEASURE HAZMAT-2 (CONT.)

- ❖ Procedures for work that involves soil disturbance are discussed in the RRMP (ERM & Erler & Kalinowski, 1998). Shallow soil disturbance (one foot or less) requires that workers have training on safety procedures applicable to the constituents present in these soils (lead, nickel, zinc, and benzo(a)pyrene, for example). Since the primary exposure pathway is inhalation or ingestion, worker safety would be maintained through the use of dust masks and proper hygiene (such as washing hands before eating or drinking). Measures would be taken to prevent erosion or wind dispersion of soils into adjacent surface water and the Bay.

- For soil disturbance below one foot, enhanced worker safety methods would be taken as appropriate to protect against exposure. Prior to any excavation, a site-specific health and safety plan would be prepared addressing site-specific contaminant concerns. Measures would be taken to eliminate migration of contaminants via wind, surface water, or collection on personnel and equipment. Soils would be kept damp at all times and stockpiled soils would be placed on and covered by plastic sheeting to avoid airborne dust problems.
- For areas where excavations are required (building sites, utility trenches), additional site characterization would be implemented by an environmental contractor licensed by the State of California to conduct investigations at hazardous waste sites.

b) See Discussion VII (a) above. Mitigation Measures HAZMAT-1 and -2 would reduce the potential for adverse impacts to a less than significant level.

c) There are no schools or proposed schools within one-quarter mile of the project site. There are 20 schools within a two-mile radius of the project: Alternative High School Program, Berkeley Adult School, Berkeley Arts Magnet at Whittier, Berkeley High, Berkeley Montessori School, Berkwood Hedge School, Black Pine Circle Day School, Crowden School, East Bay French American School, East Bay Science and Arts Middle School, Jefferson, Longfellow Arts & Technology Magnet, Malcolm X Arts & Academics Magnet, Martin Luther King, New Age Academy, Rosa Parks Environmental Science Magnet, Shelton's Primary Education Center, St. Joseph the Worker, Walden Center & School, and Washington Communication & Technology. The proposed Franklin Adult School is within a two-mile radius of the project. No impact.

d) The Berkeley Meadow and Brickyard areas of Eastshore SP are not included on a current list of hazardous materials sites (Cortese List), compiled by the California Department of Toxic Substances Control (DTSC), pursuant to Government Code §65962.5. The Point Isabel portion of Eastshore SP is the only part of the Park that is still on DTSC's Cortese List. The project site is also not on the U.S. Environmental Protection Agency's National Priorities List. Therefore, no impact would occur with project development.

e,f) The proposed project locations are not located within an airport land use plan, within two miles of a public airport, or within the vicinity of a private air strip. Therefore, no impact would occur as a result of this project.

g) All construction and restoration activities associated with the project would occur within or immediately adjacent to the boundaries of Eastshore SP and would not block any public road, although short delays could occur along University Avenue. No proposed work would interfere with any emergency response plans or emergency evacuation plans. Therefore, the impact of this project on an emergency response or evacuation plan would be less than significant.

h) The Berkeley Meadow site contains annual grasses and exotic plant species that can become flammable during the dry season (June-October). Heavy equipment, if used on or driven across any flammable areas, could cause a fire due to improper exhaust systems or by the creation of sparks from the friction of metal parts on rock or other hard surfaces. While no structures would likely be threatened by a fire, damage could occur to wildlife habitat and smoke blowing across the adjacent I80/580 freeway could result in vehicle accidents. The following mitigation measures would reduce any potential adverse impacts to a less than significant level.

MITIGATION MEASURE HAZMAT-3 CONSTRUCTION FIRE MANAGEMENT

- A Health and Safety Plan would be developed and reviewed by all project staff prior to the start of any work. Job site characteristics to reduce the potential for fire will be included such as, but not limited to, those discussed below:
  - ❖ Spark arresters or turbocharging (which eliminates sparks in exhaust) and fire extinguishers would be required for all heavy equipment.
  - ❖ Construction crews would be required to park vehicles away from flammable material, such as dry grass and brush. At the end of each workday, heavy equipment would be parked over mineral soil, asphalt, or concrete to reduce the chance of fire.
  - ❖ A Site Maintenance Plan, a requirement of the General Plan (DPR, 2002), would contain procedures, techniques, and timing of fuel modification and fire prevention activities in upland habitat areas.

MITIGATION MEASURE HAZMAT-4 OPERATIONAL FIRE MANAGEMENT

- Areas surrounding any structures would be kept clear of flammable materials to a minimum distance of 30 feet, in compliance with the California Fire Plan, Pre-Fire Management guidelines.
- A fire suppression system would be installed in all structures, as required by the California Building Code Standards 9-1, 9-2, and 9-3; and the State Fire Marshall.

VIII. HYDROLOGY AND WATER QUALITY.

ENVIRONMENTAL SETTING

Site Features

The Berkeley Meadow and Brickyard sites are bordered to the south, west, and north by central San Francisco Bay. Historically, the project site was characterized by a narrow shoreline band of small tidal marshes, sand dunes, and beaches (see Figure 7, Appendix A). An extensive zone of subtidal and intertidal flats, which likely included both bay mud (fine-grained clay) and sandy deposits, fronted these areas. The direct, western exposure of the site to waves propagating through the Golden Gate and wind-waves developed within the Bay creates a moderately erosive shoreline environment that limits the creation of tidal marshes (which require a more quiescent environment) to protected areas and supports a shoreline more resistant to erosion (beaches, dunes, etc.). Inland of the historic shoreline, a series of small east-west flowing streams and watersheds creates a gently sloping alluvial plain, bisected by a series of small stream channels (DPR 2002).

Most of the current project site was created by the placement of fill along and bayward from the historic shoreline. As a result, a considerable portion of the modern shoreline represents the interaction between the fill and shoreline armoring materials, and the environmental processes (wave action, stream flows). (DPR 2002).

Surface Water and Watersheds

Streams: The major surface water body is San Francisco Bay. Other surface water resources are several freshwater streams that drain to the Bay, and small seasonal wetlands. The Berkeley Meadow parcel is bordered to the north by Schoolhouse Creek. Schoolhouse Creek drains a relatively small, two-square-mile watershed in Berkeley, just east of Interstate 80. The creek has been culverted throughout a majority of its drainage and exits to the Bay in a seven-foot reinforced concrete pipe at the North Basin. The creek culvert is located under the Virginia Street extension, an open space area, which is part of the project site. A gravel and sand beach is located directly north of the creek outfall (DPR 2002). Schoolhouse Creek historically emptied into the Bay (circa 1850) near the present intersection of 2nd Street and Virginia Street in Berkeley (Sowers 1995, in DPR 2002).

Strawberry Creek, a major landmark in the East Bay, drains an extensive, approximately four and a half (4.5) square mile watershed, which begins on the ridges of the Berkeley Hills and flows generally in an open channel through the University of California at Berkeley campus. The creek is mostly culverted, with a few open and restored channel reaches, across central Berkeley. Currently, the creek flows through a seven-foot by eight-foot reinforced concrete culvert that empties into the Bay just south of University Avenue and Berkeley Meadow. Gravel and mudflats that are exposed in lower tides characterize the current mouth of the creek. Historically, Strawberry Creek was bordered by a riparian corridor and emptied into the Bay through a willow grove and a tidal marsh. The tidal marsh extended to what is now 3rd Street and the willow grove extended to 8th Street (DPR 2002).

The watersheds of both Schoolhouse and Strawberry creeks have been disturbed and modified, beginning in the late 1700s by the Spanish. The introduction of cattle caused

overgrazing in the hills, compaction of watershed soils, destruction of riparian vegetation, and trampling of the banks, resulting in widespread channel incision and gullying throughout the watersheds and increased sediment deposition into the Bay (Cooke and Reeves, 1976, in DPR 2002). A much more dramatic human alteration occurred with the arrival of the settlers and the discovery of gold in the Sierras. Hydraulic mining methods used in extracting gold produced massive sediment discharges to the Sacramento River system and ultimately to the Bay. During that same timeframe, urbanization of the East Bay hills continued the process of human alteration. Cattle grazing (and agriculture on the lower plains) was replaced by commercial and residential areas. The additional impervious surface areas increased surface runoff and creek flows and decreased groundwater infiltration. Most of the streams were culverted to maximize developable areas. Many of these culverts were extended to the Bay (DPR 2002).

Wetlands: Significant fresh water seasonal wetlands occur on the Berkeley Meadows, in depressions caused by differential settlement of the landfill materials. The wetlands all appear to be fed by direct precipitation and surface water runoff. Based on the depth to groundwater, the wetlands do not appear to be fed by groundwater, but act only as groundwater recharge areas.

Groundwater

Depth to groundwater at the Meadow ranges from +4.8 to +6.0 feet mean sea level (MSL) and from -1.5 to +7.0 feet MSL at the Brickyard (Tetra Tech,1995); the potentiometric (water table) surface slopes gently toward the Bay. At the Brickyard, the potentiometric surface is irregular with no discernable flow direction (Tetra Tech, 1995), probably due to the nature of the landfill debris. Groundwater levels will fluctuate daily with the tides. The local groundwater table is recharged by rainfall and surface flow infiltration, and by subsurface flows from the east.

Water Quality and Beneficial Uses

Water quality in the San Francisco Bay Area is regulated by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). The SFBRWQCB has generally characterized the waters of the project site as Surface - Coastal waters within the Central Basin. Some of the significant beneficial uses summarized for coastal waters include freshwater, estuarine habitat, marine habitat, fishing, and contact and noncontact water recreation. Wetlands within the project site are also identified by the SFBRWQCB as being of significant value. The marshes and intertidal zones represent extensive areas of the project sites and include such beneficial uses as fish migration, contact and noncontact water recreation, fishing, and marine and estuarine habitat (DPR 2002).

Water quality within the project site varies greatly, relative to local and regional environmental conditions, the seasons, and impacts from the urban areas to the east. Typically, water quality during the rainy season at the shoreline is impacted by stormwater runoff, as pollutants from developed areas are flushed to the Bay via municipal stormdrain systems. In the past, there have been significant water quality issues associated with Strawberry Creek. Like many urban creeks, Strawberry Creek drains large residential, commercial, and industrial areas, which can be sources of pollutants. Recent efforts by the University of California and the City of Berkeley have resulted in improved water quality throughout the watershed (DPR 2002).

Interaction of the onsite water table with various landfill debris also creates a groundwater pollution problem. Pollutants identified in groundwater in Berkeley Meadow and the Brickyard include oil and grease, TPH[8] diesel, TPH gasoline, gasoline components (benzene, toluene, ethylbenzene, and xylene), chlorobenzene, chloroform, naphthalene, phthalates, and low levels of lead (DPR 2002).

Tides and Flood Zones

The Bay (and the Pacific Coast in general) experiences a "mixed diurnal" tidal cycle, with two high tides and two low tides during each 26-hour tidal cycle. The average daily tidal range is about six feet. During large winter storms, the combination of low barometric pressure and onshore winds (which push the ocean water shoreward) can create a "storm surge" that can raise the water level above the predicted astronomical tides. These conditions (also associated with the El Niño phenomenon) produce the highest Bay water levels and can cause flooding to low-lying areas. At the project site, the 1978 Berkeley FEMA flood study used a Bay elevation of 7.0 feet National Geodetic Vertical Datum (NGVD) as the estimate of the 100-year water level (see Figure 8, Appendix A). This was slightly revised by the USACE in a 1984 study (USACE 1984) which refined the estimate of the 100-year water surface elevation in this area to 6.4 feet NGVD (DPR 2002).

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	☐	☒	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐

[8] TPH = Total Petroleum Hydrocarbons, differentiated as diesel and gasoline.

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
f)	Substantially degrade water quality?	☐	☒	☐	☐
g)	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?	☐	☐	☐	☒
h)	Place structures that would impede or redirect flood flows within a 100-year flood hazard area?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?	☐	☐	☒	☐
j)	Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

DISCUSSION

a) The potential exists during the site grading, placement of fill, and utility trench excavations to create a release of sediment to nearby storm drains and ultimately to San Francisco Bay. Implementation of Mitigation Measure GEO-3 will control releases of sediment in storm (or other) water runoff and reduce any impacts to water quality from sedimentation.

Another potential impact to water quality could result from releases of fuels or other fluids from vehicles and equipment during the construction process. A plan to prevent, contain, and clean up any spills (part of the Stormwater Pollution Prevention Plan) would be in place to mitigate for any impacts to water quality (see Mitigation Measure HAZMAT-1). Disturbance of existing surface or subsurface fill materials has the potential to release hazardous waste components from the former landfill materials. Implementation of Mitigation Measure HAZMAT-2 would reduce those impacts to less than significant.

b) This project would not result in an impact to groundwater supplies since no groundwater extraction will occur. Significant changes to groundwater infiltration should not occur due to this project. The shallow groundwater underneath the project site is contaminated by landfill waste components and is not useable. Water supply for onsite facilities will be obtained by connecting to the municipal water supply main.

c) This project could substantially alter the existing drainage pattern in a manner that could result in substantial on- or offsite erosion or siltation. The existing ground surface will be raised by placement of fill to cap the underlying landfill materials. Low areas will be constructed within the clean fill material to create additional seasonal wetlands at Berkeley Meadows. Part of the Brickyard site currently functions as a "put-and-take" fill area, with constantly changing topography as fill is stockpiled and then removed. A portion of this area will be graded for the new modular office building, modifying the drainage patterns. Implementation of Mitigation Measure HYDRO-1, in conjunction with Mitigation Measure GEO-3, would reduce any potential erosion or siltation impacts to a less than significant level.

MITIGATION MEASURE HYDRO-1 – EROSION AND SILTATION REDUCTION
Develop grading plans for the Berkeley Meadow and modular office area of the Brickyard to direct surface flows into wetland areas or existing storm drain systems, as appropriate. Storm water from roads and parking lots will be directed into existing storm drains, not seasonal wetlands. Drainage devices (swales, ditches, and culverts) will be designed to reduce or eliminate erosion and sediment loss from surface runoff.

d) The project could substantially alter the drainage pattern of the area in a manner that would increase the risk of on- or offsite flooding. Preparation and implementation of a grading plan, as required in HYDRO-1 above, will properly direct surface runoff into either constructed or natural seasonal wetlands or into nearby stormdrains. Implementation of an SWPPP, as required in Mitigation Measure GEO-3, will provide properly engineered conduits (gutters, culverts, ditches, drains) to adequately handle the calculated storm water runoff and reduce any potential flooding problems to a less than significant level.

e) The amount of surface water runoff should not be increased by a significant amount, provided a final grading plan and SWPPP are developed and implemented (Mitigation Measures GEO-3 and HYDRO-1). The Berkeley Meadow project area will be covered with a three- to four-foot layer of clean fill, so that surface runoff will not be exposed to waste materials. The constructed wetlands will have a clay layer barrier to prevent infiltration and leaching of waste materials into shallow groundwater and ultimately to San Francisco Bay. Increased impervious surfaces resulting from this project would include the modular footprint, not to exceed 1,500 square feet (ft^2), a walkway connecting the parking lot and office, and the adjacent parking area, with a chip seal surface area of approximately 3,200 ft^2. Storm water from both facilities would sheet drain into existing drainage facilities. Implementation of Mitigation Measures GEO-3 and HYDRO-1 would reduce any potential impacts from runoff to a less than significant level.

f) The potential exists to degrade water quality in San Francisco Bay if soil erosion and runoff problems are created by this project. The implementation of Mitigation Measures GEO-3, HAZMAt-1 and -2, and HYDRO-1 will prevent or decrease any potential impacts to water quality to a less than significant level.

g) This project does not include the construction of housing in the 100-year flood plain. The 100-year coastal flood level, as delineated on the FEMA floodplain map (FEMA, 2002), is located at an elevation of seven feet MSL (see Figure 8, Appendix A). Therefore, there is no impact from this project.

h) This project will not place structures that could impede or redirect flood flows within a 100-year floodplain (FEMA, 2002). Therefore, there is no impact from this project.

i) This project will not expose people or property to any increased risk from flooding, including flooding from the failure of a dam or levee. The dam failure inundation map for Berkeley (ABAG, 2003) indicates that a failure of Berryman Reservoir would flood the low

areas east of the project site and the north basin area. The impact to the public at the project site would be less than significant.

j) There is no risk to the public from inundation due to a landslide. A slight increased risk to the public or to property from a tsunami is possible at the project site. Based on a recent report from the U.S. Army Corps of Engineers (DPR 2002), a probable maximum tsunami wave height of seven feet MSL is possible. Placement of tsunami warning signs along beachfront areas should be considered to educate the public to the potential risks. The City of Berkeley and East Bay Regional Parks District should be consulted, as they may have existing signs or regulations/standards for such signs. Activities proposed as part of this project would not substantially increase public exposure to this natural event. Less than significant impact.

IX. LAND USE AND PLANNING.

ENVIRONMENTAL SETTING

Eastshore SP extends approximately 8.5 miles along the eastern shoreline of San Francisco Bay from the San Francisco-Oakland Bay Bridge north to the Marina Bay neighborhood in the City of Richmond. The park includes approximately 2,262 acres of uplands and tidelands along the waterfronts of the cities of Oakland, Emeryville, Berkeley, Albany, and Richmond. The project site is bound by San Francisco Bay to the west and by I80/580, residential, commercial, and industrial areas to the east. The proposed project would occur within the Berkeley Meadow and Brickyard areas of the park, located entirely within the Berkeley city limits. (See Appendix A for project site maps.)

The Berkeley Meadow consists of an undeveloped 75-acre area, located north of University Avenue and crisscrossed by a number of informal paths. The landscape is characterized by primarily nonnative vegetation, including annual grasses, scattered perennial shrubs, and a few isolated trees. The area also contains several areas of seasonal wetlands and limited stands of native willow. The Brickyard is an approximately 30-acre area of uplands and a narrow spit of land that extends to the south, creating the sheltered Brickyard Cove. The spit and beach areas are undeveloped and currently used for passive recreation, such as walking and bird-watching. The northeastern portion of the Brickyard is leased for two different uses: the temporary storage of clean fill material ("put and take"), which occupies the flat area to the west of the existing parking area; and the Seabreeze Market/Deli, located on the southwest corner of University Avenue and West Frontage Road. Other uses within the project boundaries include commercial concessions that seasonally lease open areas at the east end of the Virginia Street extension and at the Brickyard to sell pumpkins and Christmas trees. These operations, which were all in existence prior to DPR ownership of the unit, are maintained as interim uses.

The Eastshore SP GP has designated the Berkeley Meadow as a Conservation Area, which provides for “areas whose natural habitat values will be protected and enhanced, while accommodating lower intensity recreation that is compatible with and dependent on those values.” The Brickyard is designated as a Recreation Area, which provides for “areas that can accommodate more intensive recreation and are characterized as having limited habitat value and sufficient size to accommodate the necessary parking, utilities, and infrastructure needed to support recreational uses.”

As noted above, both the Meadow and Brickyard areas are within the Berkeley city limits. The City of Berkeley GP designates the project area as Open Space, identified as being appropriate for “parks, open space, recreational facilities, natural habitat, and woodlands.” Allowable land uses include “parks, recreational facilities, schoolyards, community services, and facilities necessary for maintenance of the areas.” The project area is also located partially within the jurisdiction of the Bay Conservation Development Commission (BCDC) and has a priority use designation of Waterfront Park/Beach in the San Francisco Bay Plan (Plan Map 4).

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

DISCUSSION

a) The proposed project is wholly within the boundaries of Eastshore SP and involves public access improvements and habitat enhancement in the Berkeley Meadow and Brickyard areas of the park. There are small pockets of commercial and residential uses located in areas immediately adjacent to the park boundaries and west of I80/580, but there are no residential areas within the project site. The project area does not contain or define an established community and no project activities would disrupt or divide any community functions. The construction and operation of the proposed project would not impede access to any adjacent parcels or communities. Therefore, the proposed project would have no impact on established communities.

b) The proposed project is consistent with all applicable state and local land use plans, policies, and regulations currently in effect, including the Eastshore SP GP, City of Berkeley GP, Waterfront Master Plan, West Berkeley Plan, University Avenue Strategic Plan, San Francisco Bay Plan, and San Francisco Bay Trail Plan. With certification of this MND and full implementation of the mitigation measures herein, the project would be in compliance with CEQA. No impact.

c) There is no habitat conservation plan or natural community conservation plan that applies to the project or project area. Therefore, the project would not conflict with any such plans. No impact.

X. MINERALS.

ENVIRONMENTAL SETTING

There are no mineral resources on the Berkeley Meadow or Brickyard areas of Eastshore SP. (See Appendix A for project site maps.) The site is underlain by 10 to 15 feet of artificial fill, municipal waste, and construction debris. The only possible resource would be recycling of waste metals from the landfill debris.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

DISCUSSION

a,b) The project area has no known mineral resources that would be lost due to the project and is not classified or nominated as a locally important mineral resource recovery site. Therefore, there would be no impact from this project.

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XI. NOISE.

ENVIRONMENTAL SETTING

The Eastshore SP project sites at Berkeley Meadow and the Brickyard are located on the edge of the City of Berkeley, a highly urbanized area, and the eastern property boundary is within 250 feet of an eight-lane interstate freeway (I80/580). (See Appendix A for project site maps.) Freeway noise is the predominant background sound at both sites. Sound levels for noise generated by vehicles on a freeway, including bus and truck traffic, at a distance of 100 feet, is typically rated at 70 decibels (dBs), decreasing with distance (Berkeley GP, Noise Element, p. 4.4-3). The majority of both proposed project sites are more than 100 feet from the I80/580 corridor.

The second most noticeable source of noise at the proposed project location is the "put-and-take" operation for construction fill, on the northern half of the Brickyard property, just southwest of the Seabreeze Market and parking area. Access to this operation is from West Frontage Road, approximately 150 feet south of the intersection with University Avenue. A steady flow of dump trucks and related construction vehicles move in and out of the facility on weekdays, during daylight hours. Large excavators are used onsite to load, unload, and distribute the fill material. Sound levels immediately adjacent to machinery may temporarily exceed 80dB; levels generated by normal truck ingress/egress are comparable to the freeway noise levels noted above.

The northern edge of Berkeley Meadow and the western and southern edges of the Brickyard are bounded by San Francisco Bay. The distance from the freeway is generally sufficient to prevent traffic noise from overshadowing bird vocalizations and wave sounds at the shoreline. However, construction activities at the put-and-take site currently interfere with the shoreline sounds at the Brickyard site during daily hours of operation.

Other noise sources in the vicinity of the project include vehicular traffic (e.g., delivery trucks, transit buses, private vehicles) on University Avenue, West Frontage Road, and Marina Blvd., and activities associated with small public gatherings and outdoor recreation. The parking area adjacent to the Seabreeze Market also generates moderate, sporadic car and truck traffic noise throughout the day.

There are no public use airports or private airstrips within two miles of the proposed project sites. Overflights from regional Bay Area airports are common, but do not contribute substantially to existing ambient noise levels at the project location. Helicopter traffic is sporadic and is not considered a normal contributing source of noise.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☒	☐	☐

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	☐	☐	☒	☐
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	☐	☐	☐	☒
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	☐	☒	☐	☐
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

DISCUSSION

a) As noted in the Environmental Setting section above, existing background noise levels at the eastern boundaries of both Berkeley Meadow and the Brickyard are currently at or near 70dB for most of the time, due to the proximity of the I80/580 freeway and onsite fill operations. However, levels at most locations within the Meadow are consistently below 70dB, and levels also diminish below 70dB at the Brickyard during periods when the fill operation is closed. The Berkeley GP (Noise Element, p. 4.4-5) considers community noise exposure levels of less than 70dB normally acceptable for outdoor activities and recreation, including playgrounds and neighborhood parks, and commercial/professional businesses and offices. Implementation of this project would not significantly change existing uses, although dog owners would have to walk their pets outside the Meadow area. The proposed location for the modular office structure is over 250 feet from the freeway corridor and sufficiently distant from the ongoing put-and-take operation to reduce average sound levels within the building to below 70dB.

Once the project begins, construction noise levels at and near the project area would fluctuate, depending on the type and number of construction equipment and vehicles operating at any given time, and could exceed ambient noise standards in the immediate vicinity of the work for brief periods of time. The distance from lodging accommodations and small commercial ventures in the vicinity of the proposed work site is sufficient to prevent an objectionable level of noise. However, depending on the specific construction activities being performed, short-term increases in ambient noise levels could result in speech interference at the work site and a potential increase in annoyance to the closest motel facilities and those using the adjacent Virginia Street extension or traveling University Avenue or Marina Blvd. As a result, construction-generated noise would be considered to have a potentially significant short-term impact. Implementation of the

following mitigation measure NOISE-1 would reduce those potential impacts to a less than significant level.

MITIGATION MEASURE NOISE-1
• Construction activities would generally be limited to the daylight hours, Monday - Friday. • Internal combustion engines used for any purpose at the job site would be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction would utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary. • Stationary noise sources and staging areas would be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources would be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

b) Construction activity would not involve the use of explosives, pile driving, or other intensive construction techniques that could generate significant ground vibration or noise. Minor vibration immediately adjacent to excavating and paving equipment would only be generated on a short-term basis. Therefore, groundborne vibration or noise generated by the project would have a less than significant impact.

c) Once the proposed project is completed, all related construction noise would disappear. Nothing within the scope of the proposed project would result in a substantial permanent increase in ambient noise levels. Therefore, no impact.

d) See Discussion XI (a) above. Mitigated to a less than significant impact.

e,f) This project is not located within an airport land use plan, within two miles of a public airport, or in the vicinity of a private air strip. Therefore, no impact would occur as a result of these project activities.

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XII. POPULATION AND HOUSING.

ENVIRONMENTAL SETTING

Eastshore SP extends approximately 8.5 miles along the eastern shoreline of San Francisco Bay, from the San Francisco-Oakland Bay Bridge north to the Marina Bay neighborhood in the City of Richmond. The park provides a significant open space and recreation resource in the midst of one of the state's most urban settings. The park includes approximately 2,262 acres of uplands and tidelands along the waterfronts of the cities of Oakland, Emeryville, Berkeley, Albany, and Richmond. (See Appendix A for project site maps.)

The proposed project is wholly within the boundaries of Eastshore SP and involves public access improvements and habitat enhancement in the Berkeley Meadow and installation of a modular office structure for park operations in the Brickyard area. Both areas are within the Berkeley city limits. The project site is bound by San Francisco Bay to the west and by I80/580 and residential, commercial, and industrial areas to the east. There are small pockets of commercial and residential uses located in areas immediately adjacent to the park boundaries and west of I80/580, but there are no residential areas within the project site. The project area is currently used for open space and recreation purposes and is surrounded by urban land uses. Several other land uses within the unit are conducted by short-term lease holders, including the temporary storage of clean construction fill material in the Brickyard area, and the Seabreeze Market/Deli, a produce market and café. Commercial concessions have seasonally leased open areas at the east end of the Virginia Street extension and at the Brickyard to sell pumpkins and Christmas trees; however, these leases will not continue beyond the 2003 season. The project area has a land use plan designation of Open Space in the Berkeley GP and is zoned "Specific Plan" and is subject to the provisions of Berkeley's Waterfront Plan (1986).

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION

a) The proposed project would provide for restoration of natural resource areas and office space for park management and security, and would not encourage a significant increase in use. The project does not involve a housing component and all work would take place within or immediately adjacent to the park boundaries. The project does involve the installation of a modular structure in the Brickyard area to meet administrative, programmatic, and security needs for the park. Associated infrastructure improvements, including sewer, water, communications, and electrical connections, would be installed to service the proposed structure. In addition, sewer connections to provide service for future facilities (e.g., concessions) would be installed. As noted in the Environmental Setting above, a portion of the Brickyard is already used by concessions. However, infrastructure improvements would not extend beyond the limits of the project area and would support continued use of the area for recreation by the current residential base and visitors from surrounding communities. Future businesses within the Brickyard area would be small, in keeping with existing facilities, and supportive of the dynamic mix encouraged in the West Berkeley Plan and the University Avenue Strategic Plan. The population of Berkeley has remained relatively static for the last 10 years. The proposed project would not provide or increase service capabilities in a manner that would encourage relocation to the area. The proposed project, and any future development utilizing the service extensions, would not go beyond the level of development outlined in the Eastshore GP. Therefore, the proposed project would have a less than significant impact on population growth in the area.

b) As noted in Discussion XII (a) above, the project does not involve a housing component. The proposed project would occur within the confines of park boundaries in an area that is not developed or planned for residential use. Therefore, the proposed project would neither modify nor displace any existing housing. No impact.

c) As noted in Discussion XII (a) above, activities related to the construction or operation of the project would not displace existing housing or eliminate any current employment, requiring relocation of personnel to other areas. The proposed project would occur within the confines of park boundaries; no housing currently exists or is planned within the project area. No impact.

XIII. PUBLIC SERVICES.

ENVIRONMENTAL SETTING

The project site is located in an urban area within the Berkeley city limits. (See Appendix A for project site maps.) Emergency access to the site is on paved public roads. The project site is currently managed by EBRPD, which maintains its own police and fire department and is the first responder for both law enforcement and fire protection, with support provided by the City of Berkeley Fire and Police Departments. EBRPD provides security officers to patrol and conduct enforcement at the project site. The department has 60 sworn peace officers and 35 support staff, and operates 24 hours per day. The EBRPD Fire Station is located at Tilden Park, in the Berkeley Hills, approximately two miles from the project site. EBRPD also maintains a fleet of helicopters, stationed in Hayward, approximately 20 miles to the south. These helicopters are available to provide medical evacuation or other services as necessary. Response time is approximately 15-20 minutes.

The Berkeley Police Station is located at 2100 Martin Luther King Jr. Way, close to its intersection with University Avenue, approximately 1.8 miles from the project site, and is within Beat 16. The Berkeley Police Department also has two boats at the nearby Berkeley Marina, with responsibilities that include bay patrol and search and rescue.

Station 1 of the Berkeley Fire Department is located at 2442 8th Street, approximately one mile away, via city streets, from the entrance to the project site. Station 6 is located at 999 Cedar Street, approximately 1.3 miles away. The project site is not within the City of Berkeley's designated Fire Hazard Area. Proposed park buildings in the project site, as described in the General Plan, would not require increased fire protection services (City of Berkeley Deputy Fire Marshal, as cited in Resource Inventory, p. U-7).

The U.S. Coast Guard, 11th District, consists of 170 active duty, reserve, and civilian personnel operating out of the main office on Coast Guard Island, as well as a smaller office at Group Humboldt Bay. Responsibilities include serving as Federal on Scene Coordinator for accident investigations. The Coast Guard also operates an air station at San Francisco International Airport. The primary mission of the air station is maritime search and rescue, but its duties also include maritime law enforcement, environmental protection, and military readiness. The Berkeley Police Bay Patrol unit works in cooperation with the Coast Guard within San Francisco Bay.

The City of Berkeley Department of Transportation Emergency Access and Evacuation Network map designates University Avenue adjacent to the project as an emergency access and evacuation route. If necessary, the Virginia Street extension, along the northern border of the Meadow, would also be used for emergency vehicle access to the Marina area (Tong 2003).

There are no schools or proposed schools within one-quarter mile of the project site. However, there are 20 schools within a two-mile radius of the project. These include Alternative High School Program, Berkeley Adult School, Berkeley Arts Magnet at Whittier, Berkeley High, Berkeley Montessori School, Berkwood Hedge School, Black Pine Circle Day School, Crowden School, East Bay French American School, East Bay Science and Arts Middle School,

Jefferson, Longfellow Arts & Technology Magnet, Malcolm X Arts & Academics Magnet, Martin Luther King, New Age Academy, Rosa Parks Environmental Science Magnet, Shelton's Primary Education Center, St. Joseph the Worker, the Walden Center & School, and Washington Communication & Technology. The proposed Franklin Adult School is also within two miles of the project area.

The City of Berkeley operates numerous city parks within a two mile radius of the project area, including Cesar E. Chavez Park, immediately northwest of the Meadow, across Marina Blvd. The park is approximately 90 acres, including an area for off-leash dogs. Berkeley also operates the nearby Berkeley Marina, located directly across Marina Blvd. from the Meadow's western boundary. A section of the Bay Trail adjoins the project site, along the eastern edge of the Meadow. An unimproved Bay Trail segment also exists along University Avenue, between West Frontage Road and the Marina Blvd. intersection. Future sections are proposed to pass along the eastern boundary of the Brickyard area, connecting with the existing bicycle/pedestrian bridge and I80/580 overcrossing, and along the current Virginia Street extension (fire and emergency access road), an easement owned by the City of Berkeley. Bicyclists and pedestrians currently use the existing fire road for recreational purposes.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☒	☐	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

DISCUSSION

a) The proposed project would provide for restoration of natural resource areas and office space for park management and security, and would not encourage a significant change or increase in use. A modular structure would be installed in the Brickyard area to meet administrative, programmatic, and security needs for the park. However, no significant increase in visitation is expected as a result of the construction or operation of the new facilities, and visitation to the Meadow might actually decrease, due to the installation of fencing and the restrictions on dogs. The prohibition on dogs at the Meadow might lead to a slight increase in use at the off-leash dog area at Cesar E. Chavez Park. The level of public services required at the park is expected to remain relatively static (Tong 2003). Less than significant impact.

Use of construction equipment around flammable annual vegetation presents an increased fire risk that could result in additional demands on EBRPD and local fire response teams. Any impact on services would be temporary and nothing in the project scope would contribute to the need for an increase in the existing level of staffing or facilities. Implementation of Mitigation Measures HAZMAT-3 would reduce any potential adverse impact to fire protection services to a less than significant level. Additionally, trails within the project site at Berkeley Meadow would be 12 feet wide to accommodate emergency vehicle access. Gates in the perimeter fence would also be designed and constructed to allow for emergency vehicle access.

Although 20 schools exist within two miles of the project area, there are no schools or proposed schools within one-quarter mile of the project site, and no increased school enrollment is expected. Although the modular office proposed for the Brickyard would provide onsite space for employees, these employees are already working in rented office space adjacent to the park and, therefore, would not be expected to change their residence locations as a result of this project. No changes would occur that would require additional schools or school personnel. No impact.

County administrative requirements would be equivalent to any other minor commercial construction project. The proposed project would have no significant impact on other public services.

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XIV. RECREATION.

ENVIRONMENTAL SETTING

The project site is located entirely within the boundaries of Eastshore SP, which is owned by California State Parks and currently managed by the EBRPD. The approximately 2,262-acre park unit is located along the central and eastern shore of San Francisco Bay, in both Alameda and Contra Costa counties, and within five different municipalities: Oakland, Emeryville, Berkeley, Albany, and Richmond. The proposed project would be located at the Berkeley Meadow and Brickyard areas of the park, within the Berkeley city limits. (See Appendix A for project site maps.)

Eastshore SP provides exceptional recreational resources including both upland and aquatic areas with significant recreational value that is rare in the Bay Area. The parklands remain in a relatively undeveloped condition, with few formal recreation facilities. While several developed recreational facilities surround the park, the only formal facilities located within the park are the Point Isabel Regional Shoreline and the Bay Trail segments from Central Avenue to the Marina Bay neighborhood in Richmond and along the proposed project site at Berkeley Meadow. There is little in the way of recreational support facilities within the park, although numerous facilities are located nearby in municipal parks. Currently, the Seabreeze Market, a concession located at the southwest corner of University Avenue and West Frontage Road, is the only facility within the project area that caters to recreational users.

Although there are currently few recreational improvements within the proposed project areas, these locations have historically received a large volume of informal recreational use. Informal, well-traveled walking trails traverse much of the site. There is also an older paved extension of Virginia Street that runs between West Frontage Road and Marina Boulevard, along the North Basin shoreline. This appears to be a popular route to and from nearby Cesar E. Chavez Park (City of Berkeley), allowing people to walk along the water, away from vehicular traffic. Due to an ongoing clean fill “put-and-take” operation at the Brickyard, the only area currently available for recreational use is the beach area along Brickyard Cove and the spit of land that extends along the west side of the cove. Recreational uses in the upland areas tend to be primarily passive, informal, and individual-oriented, and include dog-walking, bird-watching, hiking and strolling, and photography. At present, these areas appear to be primarily a local destination for those within a short drive, walk, or bicycle ride from the park. The Seabreeze Market provides service to local residents and attracts a number of visitors to this area, including truckers and other freeway travelers.

In addition to the upland areas, the aquatic areas of the park also provide recreational opportunities. The South Sailing Basin is the most actively used aquatic area in the park, accommodating water-dependent activities such as sailing, windsurfing, and kayaking. For the most part, these aquatic activities are only possible because users can access the South Sailing Basin from municipal facilities at the Berkeley Marina. Generally, the park’s rugged shoreline conditions (e.g. steep slopes, construction rubble) restrict water access throughout much of the area.

There is a diverse range of recreational resources that are outside, but in the immediate vicinity of, the project site, including the Richmond, Berkeley, Emery Cove, and Emeryville City Marinas; fishing piers; picnic areas; interpretive centers and exhibits (e.g., the educational Shoreline Trail and the Shorebird Nature Center in Berkeley); and play areas and community parks, including Vincent Park, Shimada Friendship Park, and the Rosie the Riveter National Historic Park in Richmond; Cesar E. Chavez Park (adjacent to Berkeley Meadow), Horseshoe Park, and Shorebird Park in Berkeley, and Marina Park in Emeryville. The Bay Trail, which will eventually extend around both the San Francisco and San Pablo Bays, represents an important resource for linking the noncontiguous parts of the park unit and creating interconnected recreational areas. The Bay Trail "spine" is the main thoroughfare of the trail that connects parks, open space, and communities encircling the Bay. While several segments of the Bay Trail exist within Eastshore SP, the majority of the Bay Trail (both existing and planned) will be in adjoining areas, rather than in the park unit itself.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☒	☐	☐

DISCUSSION

a) This project is limited to the restoration and enhancement of onsite natural resources and the installation of a park office to support park operations. None of the proposed project activities would substantially increase visitation or demands to this or any other park or recreational facility in the area, although the ban on dogs and off-trail usage at the Meadow may cause a slight increase in the use of the off-leash dog area at nearby Cesar E. Chavez Park. Construction for this project is expected to begin in the fall of 2004 and will take approximately three years to complete. The project area would generally remain accessible to visitors during construction, although the areas of the site under active construction would be restricted to authorized personnel only for safety reasons. The project would provide formally defined trails to facilitate existing and future recreational use of the site and to provide both immediate and long-term protection for the site's natural resources. Potential impacts to existing recreational facilities would be less than significant.

b) As noted in Discussion XIV (a) above, the purpose of Eastshore SP, as per the 2002 General Plan prepared for the unit, is to preserve and protect the natural, cultural, and

aesthetic resources along San Francisco Bay and to provide appropriate recreational opportunities. The proposed project involves the construction of recreation facilities, including trails and interpretive signage, and a modular building for administrative functions. The project would create well-defined, fenced trails that would allow for visitor use, while protecting the surrounding natural resources (i.e. sensitive bird species and seasonal wetlands) from adverse impacts from dogs and indiscriminate use of the site. The modular administration building would provide a management and enforcement presence at the site to further ensure the protection of the resources of the area. The improvements would be designed to accommodate the current level of use of the site and would not significantly impact park resources. The proposed improvements would be sited and designed in a manner that would not result in permanent adverse physical effects on the environment. The project does not propose any new aquatic access or any improvements that would interfere with existing aquatic recreation. However, as noted elsewhere in this document, there is the potential for significant temporary environmental impacts during project construction. Full implementation of the mitigation measures proposed as part of this document would reduce any potential impacts to a less than significant level.

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XV. TRANSPORTATION/TRAFFIC.

ENVIRONMENTAL SETTING

The proposed project area, which includes the Berkeley Meadow and the Brickyard, is located within the boundaries of Eastshore SP, at the western edge of the Berkeley city limits. The surrounding area is highly urbanized, with connections to major transportation routes throughout the San Francisco Bay Area. Berkeley Meadow is bounded on the west by Marina Blvd., a two-lane paved road, and the overflow parking area for the Berkeley Marina and Doubletree Hotel; the marina and hotel are located across Marina Blvd. to the west. The Virginia Street extension, a paved, single-lane fire access road that is closed to nonemergency motorized vehicles, extends along the North Basin shoreline, on the northern boundary of the Meadow. West Frontage Road, a two-lane paved road, runs along the eastern edge of both the Meadow and Brickyard area, and University Avenue bounds the Meadow to the south and divides the Meadow and Brickyard properties. San Francisco Bay, including the South Sailing Basin and Brickyard Cove, extends along the southern and western shoreline of the Brickyard. (See project site maps, Appendix A.)

ROADS AND HIGHWAYS

Interstate 80/580 (I80/580), the East Shore Freeway, runs generally north/south in this area, paralleling the park boundary, and is only separated from park lands by the West Frontage Road, a two-lane, paved city street, and buffer areas along the interstate highway easement. The University Street Exit, off southbound I80/580, merges with University Avenue just east of West Frontage Road and the entrances to both the Meadow and Brickyard. The average annual daily traffic count in 2002 on this eight-lane interstate freeway, from the I80/580 intersection north of Berkeley and I80/880 intersection to the south, was approximately 94,000 (Caltrans, 2002 Traffic Volumes). However, the Berkeley GP (Transportation Element, p. 2-4) reports a 24-hour traffic volume of 232,000 on I80/580, between University Avenue, adjacent to the park entrance for both the Meadow and Brickyard areas, and Ashby Avenue (approximately one mile) in 2000. This equates to a 30% increase in traffic volumes from 1977-2000 for this section of highway.

I80/580 is generally rated as a Level of Service (LOS) E, with extended periods of LOS F during morning and evening commute hours. LOS E conditions include unstable traffic flow with rapidly fluctuating speeds and flow rates; delays are significant. LOS F conditions depict forced traffic flow, where speed and flow may drop to zero and delays are considerable; arrival flows exceed traffic discharges. I80/580 along the length of the project area and University Avenue, between downtown Berkeley and the I80/580 intersection, are designated scenic routes by the City of Berkeley (Berkeley GP, Transportation, p. 45 and Figure 10). This designation indicates established regional routes that traverse or provide the most efficient routes to or between areas of major scenic, recreational, or cultural attractions.

University Avenue is a four-lane, divided city street that extends east from the San Francisco Bay shoreline at Shorebird Park into downtown Berkeley, and bisects the project area between Berkeley Meadow and the Brickyard. Once past the park boundaries, it continues across West Frontage Road, then up and over I80/580 into Berkeley proper. Lower University Avenue, from the I80/580 intersection to the University, is considered one of the most congested streets in Berkeley (Berkeley GP - Transportation, p. 2). However, because there are no private

residential properties on University west of I80/580 (except for a few nightly lodging accommodations), and limited retail establishments, traffic in the vicinity of the project area is generally light to moderate, even during commute hours. Traffic volumes along University Avenue westbound, past the park, increase during weekends and holidays. Special events at the nearby Berkeley Marina, Cesar E. Chavez Park, Shorebird Park, and numerous private recreational water sport venues also draw additional visitors to the area. University Avenue is considered a major city street until it crosses I80/580. West of this intersection, it is downgraded to a collector street, with a striped lane for bicycles only. Vehicle speeds above 25 miles per hour are discouraged (Berkeley GP, Transportation, p. 45, Figure 10, and Bicycle Plan, Figure 1).

Marina Blvd. intersects University Avenue at the southwestern corner of the Berkeley Meadow, then extends north along the Meadow's western boundary and merges with Spinnaker Way as it enters nearby Cesar E. Chavez Park; both are two-lane, paved city roads. Marina Blvd. provides access to Cesar E. Chavez Park, the Berkeley Marina, and the Doubletree Hotel. A graveled parking area, approximately 30-50 feet deep, extends along the eastern side of the road up to the Eastshore SP/Berkeley Meadow boundary; it is owned and maintained by the City of Berkeley.

West Frontage Road parallels the western side of I80/580, and follows the eastern boundary of both the Meadow and Brickyard. Both the Virginia Street extension and University Avenue intersect West Frontage Road. Parking lot access to the existing Seabreeze Market is off University Avenue, just before the West Frontage Road intersection and on West Frontage Road, just south of University Avenue. The entrance for the new park office facility would use the existing West Frontage Road access (see project site maps, Figures 2 and 3, Appendix A). Private vehicle traffic is generally light to moderate along this stretch of road. However, a portion of the Brickyard is currently used as a "put-and-take" facility for construction fill, generating a steady flow of dump trucks and related construction vehicles in and out of the facility at the West Frontage Road access during business hours. Most construction traffic generally travels to and from University Avenue and/or I80/580.

The Virginia Street extension is a single-lane, paved fire access road that is closed to public vehicles. It runs along the northern edge of the Meadow, at the North Basin shoreline, from West Frontage Road to Marina Blvd. The West Frontage Road access is gated, but no gate exists at the intersection with Marina Blvd. The road, which is a designated emergency access route, is passable but rarely used, except by park service vehicles; the paved surface is deteriorated. Currently, the road is used as a walking and biking path by locals and hotel visitors.

RAIL AND BUS SERVICE

Berkeley is one of the top 25 cities in the United States in the percentage of residents using public transportation. Every residence in Berkeley is within one-quarter mile of a transit line, with all local AC Transit (Alameda-Contra Costa Transit District) bus lines connecting with a Bay Area Rapid Transit (BART) light rail station. AC Transit Route 9 runs along University Avenue, between the Meadow and Brickyard. It has stops at Sixth Street/University Avenue and the Berkeley Marina approximately every 20-30 minutes daily, from 7 a.m. until 7 p.m. – just a few blocks from the project site.

Amtrak currently provides train service along the old Southern Pacific tracks that parallel 3rd Street, just east of I80/580. The Amtrak station is located between 2nd and 3rd, at University Avenue, approximately four blocks east of the proposed project area. There are 22 trips daily from Reno to San Jose on the Amtrak California/Capitol Corridor route, with connections to AC Transit routes and the Alameda/Oakland Ferry. The station is unstaffed. The Southern Pacific tracks are still in use for freight train traffic.

The Downtown Berkeley BART Station is located at 2160 Shattuck Avenue and Center Street, approximately 1.5 miles east of the project site. Trains run from approximately 4 a.m. until midnight daily (slightly shorter hours on weekends and holidays). All AC Transit routes, including Route 9 (closest to the project location) connect with this or the North Berkeley BART Station.

BICYCLE AND PEDESTRIAN ACCESS

Bicycle and pedestrian access to the scenic and recreational opportunities on the San Francisco Bay shoreline are a priority for California State Parks and the City of Berkeley. The Berkeley Waterfront Master Plan emphasizes continuous shoreline access and an increase in the quantity and quality of open space for habitat and recreation. The Bay Trail is a planned recreational corridor that, when completed, will provide a continuous, 400-mile network of trails around San Francisco and San Pablo Bays, and connect the shoreline of all nine Bay Area counties. Eastshore SP extends along approximately 8.5 miles of that shoreline, from the Bay Bridge to Richmond, and contains several existing and planned links of the Bay Trail within and adjacent to its boundaries. A portion of the existing paved trail runs along the eastern border of both the Berkeley Meadow and Brickyard, parallel to West Frontage Road. The Trail intersects the Berkeley Bicycle/Pedestrian Bridge at the Brickyard parking lot access on West Frontage Road. The bridge is elevated over a small portion of the Brickyard, south of the existing parking area, then curves back over I80/580 and along Aquatic Park on the east side of the freeway. The Bay Trail continues south along the West Frontage Road toward Emeryville.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☒

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
d) Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

DISCUSSION

a,b) All construction-related activities associated with the project would occur within Eastshore SP or within defined staging areas immediately adjacent to park boundaries. Construction vehicles would generally access the Berkeley Meadow site from the Virginia Street extension, via either West Frontage Road or the parking area off Marina Blvd. Traffic is generally light along these roads during normal weekday construction hours, and the addition of 10-12 additional vehicles (crew pickups, delivery trucks, and equipment haulers) making one to two trips each daily would not constitute a substantial increase in traffic volume for this road or result in significant additional congestion. Work crews and equipment would typically arrive or leave the site outside the normal periods of congestion. Work or ingress/egress along University Avenue would be limited to the extent feasible. However, construction of the fencing and initial grading/landscaping along the southern Meadow boundary could result in a temporary, but substantial, slowing of traffic or increase in congestion during weekends; periods of unusually heavy traffic; or when activities require encroachment into the areas immediately adjacent to the road surface. The following mitigation measures would reduce any potential adverse impact to a less than significant level.

MITIGATION MEASURE TRANS-1

- All public roads would remain open during construction. DPR or its contractors would provide traffic flaggers as necessary when construction is in progress to ensure public safety and a steady flow of traffic.
- Access for emergency vehicles and personnel would be maintained at all times.
- Activities resulting in extended traffic delays or encroachment onto public roads (i.e., University Avenue, West Frontage Road, or Marina Blvd.) would be coordinated, in advance, with the City of Berkeley Office of Transportation, Department of Public Works.

c) The project site is not located within an airport land use plan, within two miles of a public airport, or in the vicinity of a private air strip, and does not serve as a normal reporting point for air traffic in the area. Nothing in the proposed project would in any way affect or

change existing air traffic patterns in the area. Therefore, no impact would occur as a result of this project.

d) No portion of the project design or implementation contains any element that would increase hazards to traffic or other forms of transportation. The only transportation-related design change would provide multiuse, ADA-accessible trails around the perimeter and pedestrian trails into the interior of the Berkeley Meadow. A park entrance area would also be installed near the intersection of University Avenue and West Frontage Road. All proposed work and uses are consistent with the Eastshore Park GP, Berkeley GP, and Berkeley Master Waterfront Plan. No impact.

e) All construction activities associated with the project would occur within the boundaries of Eastshore SP and work would not block access on any public road (see Discussion XV [a, b] above). Most areas within the park would remain open to the public during construction, although areas of the site under active construction would be restricted to authorized personnel only. Minimum access required for emergency vehicles would be maintained at all times. Therefore, the impact of this project on emergency access or response would be less than significant.

f) Adequate parking exists to accommodate current and projected levels of visitation, including use of a limited number of spaces for crew vehicles. Work associated with this project is not expected to significantly increase the number of visitors to the project area. A portion of the gravel overflow parking area immediately adjacent to the Meadow's western boundary may be needed as an access point and/or equipment staging area. However, access to this or any other areas owned or controlled by the City of Berkeley would be coordinated prior to use. Less than significant impact.

g) The trail system proposed as part of this project supports existing alternative transportation infrastructure and conforms to guidelines in the San Francisco Trail Plan, Berkeley GP, University Avenue Strategic Plan, and Berkeley Waterfront Master Plan, as they apply to this area. No impact.

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XVI. UTILITIES AND SERVICE SYSTEMS.

ENVIRONMENTAL SETTING

The proposed project is located on an urban landfill site at the western edge of the City of Berkeley, along the San Francisco Bay shoreline in Alameda County and within Eastshore SP. There are no structures at the Berkeley Meadow site and current requirements for utilities or service systems are limited to electrical service for seasonal concession lots on the northeastern corner of the Meadow. Utility service in the Brickyard area is limited to the Seabreeze Market and seasonal concessions in the adjacent parking area. Overhead electric and telephone utility lines extend the length of the Meadow, along the west side of West Frontage Road; transmission lines are undergrounded just before the intersection with University Avenue, and extend west along the south side of University Avenue. Overhead utility lines also extend along the north side of the Virginia Street extension, along the shoreline and parallel to the Meadow boundary. A collection of individual utility service poles are scattered on both sides of the entrance to the Virginia Street extension, at West Frontage Road, providing electricity for the seasonal sales lots. The primary electrical line for the Brickyard area and remainder of the Meadow (1,200-volt line) runs underground, along University Avenue and Marina Blvd. A transformer, servicing the Seabreeze Market, is located on the east side of the driveway into the Market's parking area off University, just west of the West Frontage Road intersection. Transmission of electric power for this area is provided by Pacific Gas and Electric (PG&E).

Basic telephone service for the project area is provided by SBC and supplemented by numerous independent carriers. Carrier lines are undergrounded along University Avenue.

Water service to the project area is provided by East Bay Municipal Utility District (EBMUD). Current connections for the Seabreeze Market, on the Brickyard property, are from an eight-inch water supply line that extends along University Avenue. A 12-inch pipeline extends from Hearst Avenue to the north, along the Meadow/West Frontage Road boundary, then diverts into the eight-inch pipe on University Avenue. There are no water lines along the Brickyard/West Frontage Road boundary.

A PG&E in-ground natural gas line extends along the eastern edge of the Meadow, adjacent to West Frontage Road, and west along University Avenue. No gas lines extend along the Brickyard property boundaries.

Solid waste pickup for the Brickyard facilities (currently the Seabreeze Market) is provided by the City of Berkeley Public Works, Department of Solid Waste Management. The transfer station that processes solid waste and refuse for the project site is located at 1201 Second Street, just west of the Gilman Street I80/580 freeway exit. There is no current garbage service at the Meadow.

Wastewater treatment services to the Brickyard area (Seabreeze Market) are provided by the City of Berkeley Public Works, Sanitary Sewer Program. Existing sewer lines run along the southern portion of the West Frontage Road boundary for Berkeley Meadow and west on University Avenue; along the Marina Blvd./Berkeley Meadow boundary; and from University Avenue, along West Frontage Road. Sewer access holes nearest the project locations are

located at the University Avenue/West Frontage Road intersection; in the West Frontage Road at the existing ingress/egress to the Seabreeze parking lot, and approximately 200 feet further south, also in West Frontage Road.

Storm water drainage culverts extend along University Avenue between the Meadow and Brickyard with an outfall into Brickyard Cove; along the east side of the Meadow, along West Frontage Road; and along the Virginia Street extension (north Meadow boundary), with an outfall into North Basin approximately halfway between the West Frontage Road and Marina Blvd. intersections.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	☐ Yes	☒ No		
Would the construction of these facilities cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	☐ Yes	☒ No		
Would the construction of these facilities cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	☒ Yes ☐	☐ No ☐	☒	☐
e) Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	☒ Yes ☐	☐ No ☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒ Yes ☐	☐ No ☐	☒	☐
g) Comply with federal, state, and local statutes and regulations as they relate to solid waste?	☒ Yes ☐	☐ No ☐	☐	☒

DISCUSSION

a) Wastewater treatment for the modular building proposed as part of this project would be an onsite connection system and sewer line hookup to the existing City of Berkeley sewer system, and would be approved and permitted by the City of Berkeley Public Works Department, prior to occupancy. All connections and operation would, therefore, be in compliance with applicable San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) standards and restrictions. Existing wastewater treatment facility capacity is sufficient to support processing for discharge from the proposed facility. Although stub-ups for service to future facilities on the Brickyard site would be installed during initial sewer line hook-up, connection of additional facilities, and the resulting increase in demand for wastewater treatment, would be subject to a project-specific CEQA review and approval from the City of Berkeley Public Works Department prior to implementation. Less than significant impact.

b) See Discussion XVI (a) above. No new water or wastewater treatment facilities or expansion of existing facilities would be necessary as a result of the proposed project. No impact.

c) The proposed project would not result in the need for new storm water facilities or expansion of existing ones. However, recontouring of land at Berkeley Meadows (as noted in the Vegetation Management Plan, Appendix B) would improve drainage and distribution of storm water runoff, decreasing erosion. Increased impervious surfaces resulting from this project would include the modular footprint, not to exceed 1,500 square feet (ft^2), a walkway connecting the parking lot and office, and the adjacent parking area, with a chip seal surface area of approximately 3,200 ft^2. Storm water from both facilities would sheet drain into existing drainage facilities. Therefore, impact to existing storm water facilities would be less than significant.

d) Water for the project area, both during construction and operation, would be provided by connection to the existing EBMUD main water line on University Avenue, west of the West Frontage Road intersection. A four-inch line would extend north into Berkeley Meadow and would provide water for irrigation; the line would also extend south into the Brickyard area, and would serve the proposed modular office building and future park and concession facilities. No park-related service currently exists to either project location, although connections are in place to the Seabreeze Market on the corner of University Avenue and West Frontage Road, on the Brickyard site. Sufficient water supplies are currently available for projected demands, including limited future development at the Brickyard. New or expanded entitlements or facilities would not be required to support this project. Less than significant impact.

e) See Discussion XVI (a) above. Less than significant impact.

f) Solid waste service during both construction and operation would be minimal. Vegetation would be used for mulch or disposed of offsite, if use would contribute to the spread of invasive species; asphalt ground and recycled to the extent feasible; and tree limbs and branches chipped and used (on-site, if possible) for mulch. Debris would be removed from the site by licensed contractors approved to dispose of materials at the City of Berkeley

Solid Waste landfill or other appropriate disposal facilities. Capacity at the existing City of Berkeley landfill facility on Gilman Street is sufficient to accommodate the project's projected solid waste requirements. Once construction is completed, solid waste disposal requirements would be limited to a small amount of trash from the office facility on the Brickyard property. Less than significant impact.

g) The proposed project would comply with all federal, State, and local statutes and regulations as they relate to solid waste. No impact.

CHAPTER 4
MANDATORY FINDINGS OF SIGNIFICANCE

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	☐	☒	☐	☐
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	☐	☐	☒	☐
d) Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION

a) The proposed project was evaluated for potential significant adverse impacts to the natural environment. It has been determined that the project would have the potential to:
- Degrade the quality of the environment (soil erosion);
- Substantially reduce the habitat of a fish or wildlife species (burrowing owl, short-eared owl, northern harrier, white-tailed kite, loggerhead shrike, horned lark, saltmarsh common yellowthroat, other bird species and wildlife);
- Reduce the number or restrict the range of a rare or endangered plant or animal (burrowing owl, short-eared owl, northern harrier, loggerhead shrike, horned lark, saltmarsh common yellowthroat, all California Species of Special Concern; white-tailed kite, California Species of Special Concern and a Fully Protected Species;

However, full implementation of all mitigation measures incorporated into this project would avoid or reduce these potential impacts to a less than significant level.

b) It has been determined that the work proposed in this project would not have the potential to eliminate important examples of the major periods of California history or prehistory. Less than significant impact.

c) DPR often has other smaller maintenance programs and rehabilitation projects planned for a park unit. However, at this time, none are scheduled for Eastshore SP.

In addition to work within Eastshore SP, projects conducted by agencies other than DPR may also affect the project site and the significance of any potential impacts to the environment. Projects in the vicinity of the proposed project that are planned include:

- The City of Berkeley has a proposed Bay Trail Extension to the Berkeley Marina Project that directly impacts the Brickyard portion of the project area as well as a trail spur along the south side of University Avenue to Marina Boulevard. A pedestrian/bicycle bridge over Strawberry Creek is proposed as part of the Bay Trail Extension project. The proposed extension is an important element of the Eastshore SP GP. Final alignment, design, and construction would be subject to further consideration and coordination with the Facilities Concept Plan that will be developed as part of this project.
- EBRPD has proposed the development of lighted sport fields on the northern portion of the North Basin Strip, adjacent to Eastshore SP.
- Friends of Five Creeks, a nonprofit group, has proposed daylighting Schoolhouse Creek, adjacent to Berkeley Meadow. A feasibility study is currently underway. A timeline for implementing this work has not been established.

However, impacts from environmental issues addressed in this evaluation do not overlap with these additional projects in such a way as to result in cumulative impacts that are greater than the sum of the parts or that result in a significant adverse impact that cannot be mitigated. Full implementation of all mitigation measures associated with this and other projects would reduce any potential impact, both individually and cumulatively, to a less than significant level.

d) Most project-related environmental effects have been determined to pose a less than significant impact on humans. However, possible impacts from construction emissions (Air Quality), construction accidents and fire and hazardous materials (Hazards and Hazardous Wastes), earthquake and unstable soils (Geology and Soils), noise, recreation, and transportation, have the potential to result in significant adverse effects on humans, although many of these would be temporary. These potentially significant adverse impacts would be reduced to a less than significant level if all mitigation measures incorporated into this project are fully implemented.

CHAPTER 5
SUMMARY OF MITIGATION MEASURES

The following mitigation measures would be implemented by DPR as part of the Public Park Improvements Project.

AIR QUALITY

MITIGATION MEASURES AIR-1

- All active construction areas would be watered at least twice daily during dry, dusty conditions.
- All trucks hauling soil, sand, or other loose materials on public roads would be covered or required to maintain at least two feet of freeboard.
- All equipment engines would be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Excavation and grading activities would be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or dust from construction might obscure driver visibility on public roads.
- Stockpiles of friable material (dirt, sand, etc.) would be enclosed, covered, watered twice daily, or have (nontoxic) soil binders applied as required.
- Traffic speeds would be limited to 15 mph on unpaved roads.
- Sandbags or other erosion control measures would be installed, as necessary, to prevent silt runoff to public roadways.
- Disturbed areas would be replanted as quickly as feasible.

BIOLOGICAL RESOURCES

MITIGATION MEASURES BIO-1

- A DPR-qualified biologist or resource ecologist would conduct a training session for all project personnel, prior to the start of construction, instructing them in ways to identify sensitive species and measures required to avoid or protect these species. Training would be completed prior to authorizing personnel to work in the project area.
- The contractor, site supervisor, and project manager would meet with the DPR project resource ecologist to identify all access routes, size and location of staging areas, and boundaries of each activity prior to the start of construction. All activity and equipment would be kept within designated staging and work areas, unless approved in advance by the project resource ecologist.
- Outside lighting for the new modular office in the Brickyard Cove would be shielded or installed in a manner or location that would not direct light towards bird habitat in the nearby cove.
- Bird stickers would be installed on the windows of the new modular office to deter birds from flying into the windows.
- Animal-proof trash receptacles would be installed to ensure that wildlife populations (especially predators, such as raccoons, skunks, opossum, feral cats, and rats) do not increase due to an artificially increased supply of food.

MITIGATION MEASURE BIO-2 NORTHERN HARRIER

- Project manager(s)/designer(s) would work with the project resource ecologist to incorporate known northern harrier nesting sites into the design of the central preserve area of Berkeley Meadow, to the extent feasible. Trails would be located away from known nesting sites.
- Project activities that could impact northern harriers would be scheduled during the nonbreeding season (November through March), to the extent feasible. If construction must be scheduled during the breeding season, surveys would be conducted immediately prior to the start of work to locate nests. Active nest sites would be protected from disturbance by buffers of up to 500 feet. The buffer distance may be modified by the DPR-qualified project resource ecologist, based on variables such as season, topography, nature of construction activity, and observed bird behaviors. All operations would be excluded from these buffer areas until the young have fledged from their nests.

MITIGATION MEASURE BIO-3 SENSITIVE BIRD SPECIES

- If construction is scheduled during the breeding season, surveys would be conducted to locate nests, prior to the start of work. Active nest sites would be protected from disturbance by buffers of up to 500 feet. The buffer distance may be modified by the DPR-qualified project resource ecologist, based on variables such as season, topography, nature of construction activity, and observed bird behaviors. All operations would be excluded from these buffer areas until the young have fledged from their nests.

MITIGATION MEASURE BIO-4 SHORT-EARED OWLS AND BURROWING OWLS

- Construction areas will be surveyed for short-eared owls and burrowing owls by a DPR-qualified biologist or resource ecologist, prior to the start of work.
- If short-eared owls or burrowing owls are found breeding in the project area, the active nests will be protected from disturbance by 500-foot buffers during the breeding season (March – July for short-eared owl; February – August for burrowing owl).
- Burrowing owls may be passively relocated during the nonbreeding season (September - January), if deemed advisable by the qualified biologist after consultation with the California Department of Fish and Game. Passive relocation would be accomplished through use of a one-way door, installed at the burrow entrance for a minimum of 48 hours. After 48 hours, the door will be removed, and the burrow collapsed. An artificial burrow will be installed in an appropriate area within the project site as replacement for the collapsed burrow.

GEOLOGY AND SOILS

MITIGATION MEASURE GEO-1

- Due to the location in a high seismic hazard zone, the proposed office building structure and foundation would conform to the earthquake design requirements in Chapter 16, Division IV of the most recent accepted edition of the California Building Code (CBC). The design criteria will be for Seismic Zone 4, with a soil type of S_E or S_F as indicated in Table 16-J, of the 2001 CBC. Soil type S_E is indicated since the available Standard Penetration Data indicates blow counts less than 15. Soil type SF has been indicated as the engineer may require site-specific evaluation for building construction.

MITIGATION MEASURE GEO-2

- The placement and compaction of fill for the building foundation, use of mat foundations, and/or piles supporting the building would be integrated into the final design criteria, as necessary, for any structure constructed on the site, in conjunction with the requirements of GEO-1 above.

MITIGATION MEASURE GEO-3

- A Storm Water Pollution Prevention Plan (SWPPP) would be prepared, as required by the State Water Resources Control Board for projects involving greater than one acre of land disturbance. The SWPPP would include DPR, NPDES, and/or San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Best Management Practices (BMPs) to be used at the Berkeley Meadow and Brickyard project sites to control soil and surface water runoff during excavation, filling, trenching, and grading.
- If ground-disturbing operations must occur during the rainy season (October 31 to May 1), or if storms are anticipated during construction, "winterizing" will occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil.
- Temporary erosion control measures (BMPs) would be used during all soil-disturbing activities and until all disturbed soil has been stabilized (recompacted, revegetated, etc.). This would include, but not be limited to, the use of silt fences, straw bales, or straw or rice coir rolls, to prevent soil loss and siltation into nearby surface water and San Francisco Bay.
- Permanent erosion controls would be implemented, including proper compaction and revegetation of disturbed soil areas, as soon as feasible following construction. The State's contractor would be responsible for providing the planned BMPs for DPR review and approval, prior to the start of work. Site drainage would be directed to nearby storm drains as indicated in the SWPPP.
- The project would adhere to all local building and engineering regulations and ordinances set forth by Alameda County, BCDC, and the City of Berkeley.

HAZARDS AND HAZARDOUS MATERIALS

MITIGATION MEASURE HAZMAT-1

- A Spill Prevention and Response Plan (SPR Plan) would be developed and approved by the DPR project manager prior to the start of any work. This plan would provide guidelines for safe work practices to prevent any hazards to the public, workers, or the environment from the release of hazardous materials (fuels, oils, or other vehicle fluids). It would also include a map delineating construction staging or storage areas where refueling, lubrication, and maintenance of equipment may occur. A spill kit would be maintained onsite throughout the duration of the project. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to Eastshore SP during construction, the contractor would immediately notify the appropriate DPR staff (e.g., project manager, supervisor, or State Representative).
- All equipment would be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises.

- Equipment would be cleaned and repaired (other than emergency repairs) outside the park boundaries. All contaminated water, soil, sludge, spill residue, or other hazardous compounds would be disposed of outside park boundaries, at a lawfully permitted or authorized designation.

MITIGATION MEASURE HAZMAT-2

- A Health and Safety Plan would be developed and approved by the project manager, prior to the start of any work. This plan will provide guidelines for safe work practices to prevent any hazards to the public, workers, or the environment from the release of hazardous materials or waste (chemical and biological). Some specific items to be included are bulleted below:
  - ❖ Procedures for storage, transport, and disposal of any hazardous waste generated as part of this project. This would include any excavated soils or landfill wastes, and any herbicide residue or containers.
  - ❖ Procedures for work that involves soil disturbance are discussed in the RRMP (ERM & Erler & Kalinowski, 1998). Shallow soil disturbance (one foot or less) requires that workers have training on safety procedures applicable to the constituents present in these soils (lead, nickel, zinc, and benzo(a)pyrene, for example). Since the primary exposure pathway is inhalation or ingestion, worker safety would be maintained through the use of dust masks and proper hygiene (such as washing hands before eating or drinking). Measures would be taken to prevent erosion or wind dispersion of soils into adjacent surface water and the Bay.
- For soil disturbance below one foot, enhanced worker safety methods would be taken as appropriate to protect against exposure. Prior to any excavation, a site-specific health and safety plan would be prepared addressing site-specific contaminant concerns. Measures would be taken to eliminate migration of contaminants via wind, surface water, or collection on personnel and equipment. Soils would be kept damp at all times and stockpiled soils would be placed on and covered by plastic sheeting to avoid airborne dust problems.
- For areas where excavations are required (building sites, utility trenches), additional site characterization would be implemented by an environmental contractor licensed by the State of California to conduct investigations at hazardous waste sites.

MITIGATION MEASURE HAZMAT-3 CONSTRUCTION FIRE MANAGEMENT

- A Health and Safety Plan would be developed and reviewed by all project staff prior to the start of any work. Job site characteristics to reduce the potential for fire will be included such as, but not limited to, those discussed below:
  - ❖ Spark arresters or turbocharging (which eliminates sparks in exhaust) and fire extinguishers would be required for all heavy equipment.
  - ❖ Construction crews would be required to park vehicles away from flammable material, such as dry grass and brush. At the end of each workday, heavy equipment would be parked over mineral soil, asphalt, or concrete to reduce the chance of fire.
  - ❖ A Site Maintenance Plan, a requirement of the General Plan (DPR, 2002), would contain procedures, techniques, and timing of fuel modification and fire prevention activities in upland habitat areas.

MITIGATION MEASURE HAZMAT-4 OPERATIONAL FIRE MANAGEMENT

- Areas surrounding any structures would be kept clear of flammable materials to a minimum distance of 30 feet, in compliance with the California Fire Plan, Pre-Fire Management guidelines.
- A fire suppression system would be installed in all structures, as required by the California Building Code Standards 9-1, 9-2, and 9-3; and the State Fire Marshall.

NOISE

MITIGATION MEASURE NOISE-1

- Construction activities would generally be limited to the daylight hours, Monday - Friday.
- Internal combustion engines used for any purpose at the job site would be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction would utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.
- Stationary noise sources and staging areas would be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources would be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

TRANSPORTATION/TRAFFIC

MITIGATION MEASURE TRANS-1

- All public roads would remain open during construction. DPR or its contractors would provide traffic flaggers as necessary when construction is in progress to ensure public safety and a steady flow of traffic.
- Access for emergency vehicles and personnel would be maintained at all times.
- Activities resulting in extended traffic delays or encroachment onto public roads (i.e., University Avenue, West Frontage Road, or Marina Blvd.) would be coordinated, in advance, with the City of Berkeley Office of Transportation, Department of Public Works.

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CHAPTER 6
REFERENCES

AGRICULTURAL RESOURCES

California Department of Conservation, Farmland Mapping and Monitoring Program, 2002.
Internet address: www.consrv.ca.gov/dlrp/fmmp

AIR QUALITY

Bay Area Air Quality Management District (BAAQMD), 2003.
Internet address: www.baaqmd.gov

Bay Area Air Quality Management District, 1999. BAAQMD CEQA Guidelines – Assessing the Air Quality Impacts of Projects and Plans, San Francisco, CA.
Internet address: www.baaqmd.gov/publications/guides/pln/ceqa/ceqaguid.pdf

California Air Resources Board (CARB), 2003. Area Designation Maps/State and National (2002 Designations).
Internet address: www.arb.ca.gov/desig/adm/adm.htm

LSA Associates, Inc., et al., 2002. Eastshore Park Project General Plan Environmental Impact Report. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

Wallace Roberts & Todd, LLC et al., 2002. Eastshore Park Project Preliminary General Plan. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

BIOLOGICAL RESOURCES

California Department of Fish and Game (CDFG), 2003. California Natural Diversity Database (CNDDB). The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

California Native Plant Society (CNPS), 2001. Inventory of Rare and Endangered Plants of California (6th edition, electronic version).

Hickman, J. C. (ed.), 1993. The Jepson Manual, Higher Plants of California. University of California Press, Berkeley and Los Angeles, CA.

LSA Associates, Inc., 1998. Delineation of Clean Water Act Jurisdictional Areas, Berkeley Meadow Property, Berkeley, Alameda County, California. Prepared for Shute, Mihaly & Weinberger.

Sawyer, J. O. and T. Keeler-Wolf, 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento, CA.

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

Zeiner, David C., William F. Laudenslayer, Kenneth E. Mayer, and Marshall White, 1988. California's Wildlife – Volume I – Amphibians and Reptiles. California Department of Fish and Game, Sacramento, CA.

Zeiner, David C., William F. Laudenslayer, Kenneth E. Mayer, and Marshall White ,1990. California's Wildlife – Volume II – Birds. California Department of Fish and Game, Sacramento, CA.

CULTURAL RESOURCES

Pettitt, George A., 1973. Berkeley: The Town and Gown of it. Howell-North Books, Berkeley, CA.

Rathje, William & Cullen Muphy, 1992. Rubbish: The Archaeology of Garbage, Harper Collins, New York, NY.

United States Geological Survey, 1899 (Reprinted Aug. 1913). 15-Minute Series. Topographic San Francisco Quadrangle.

United States Geological Survey, 1949. 7.5-Minute Series. Topographic Oakland West Quadrangle.

United States Geological Survey, 1959 (Photorevised 1968 & 1973). 7.5-Minute Series. Topographic Oakland West Quadrangle.

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

GEOLOGY AND SOILS

Association of Bay Area Governments (ABAG), 2003. Bay Area Shaking Hazard Maps. Internet address: www.abag.ca.gov/bayarea/eqmaps/mapsba.html

Berkeley Seismological Laboratory, 2003. Bay Area Earthquake Probabilities. Internet address: www.seismo.berkeley.edu/hayward/probabilities.html

California Geological Survey (CGS), 2003. Seismic Hazard Zones, Oakland West Quadrangle. Internet address: http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_oakw.pdf

ERM & Erler & Kalinowski, 1998. Remediation and Risk Management Plan, East Shore Properties, Berkeley/Albany/Richmond, California.

Jennings, C. W., 1994. Fault Activity Map of California and Adjacent Areas with Locations and Ages of Recent Volcanic Eruptions, California Division of Mines and Geology (now the California Geological Survey).

LSA Associates, Inc., et al., 2002. Eastshore Park Project General Plan Environmental Impact Report. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

Petersen, M., Beeby, D., Bryant, W., Cao, C., Cramer, C., Davis, J., Reichle, M., Saucedo, G., Tan, S., Taylor, G., Toppozada, T., Treiman, J., Wills, C., 1999. Seismic Shaking Hazard Maps of California, Map Sheet 48.

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

HAZARDS AND HAZARDOUS MATERIALS

Association of Bay Area Governments (ABAG), 2003. Dam Failure Inundation Map for Berkeley/Albany.
Internet address: http://www.abag.ca.gov/cgi-bin/pickdamx.pl

CHNMB Associates, 1982. Eastbay Shoreline Report for the State Coastal Conservancy.

ERM and Erler & Kalinowski, 1998. Remediation and Risk Management Plan, East Shore Properties, Berkeley/Albany/Richmond, California.

ERM, 1998. Soil Remediation Closure Report – East Shore Properties.

Federal Emergency Management Agency (FEMA), 2002. Floodplain Hazard Maps, Department of Parks and Recreation set of compact discs.
Internet address: http://www.esri.com/hazards/

Regional Water Quality Control Board, 1998. Site Cleanup Requirements for Catellus Properties in Berkeley and Albany, Order No. 98-072, July 1998.

Tetra Tech, 1995. Summary Report, Phase II Site Investigation, Berkeley Peninsula Properties, Berkeley, California. Prepared for East Bay Regional Park District.

U.S. Environmental Protection Agency, 2003. Consumer Factsheet on Benzo(a)pyrene. Internet address: http://www.epa.gov/ogwdw/contaminants/dw_contamfs/benzopyr.html

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

Wallace Roberts & Todd, LLC et al., 2002. Eastshore Park Project Preliminary General Plan. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

LAND USE AND PLANNING

City of Berkeley, The Berkeley General Plan, 2003.
Internet address: http://www.ci.berkeley.ca.us/planning/landuse/plans/generalPlan/Intro.html

City of Berkeley, The Waterfront Master Plan, 1986.
Internet address: http://www.ci.berkeley.ca.us/planning/landuse/plans/wpgoals.htm

San Francisco Bay Conservation Development Commission, San Francisco Bay Plan, Plan Map 4 Central Bay North, as amended through June 2003.
Internet address: http://www.bcdc.ca.gov/library/bayplan/bp_map4.pdf

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

Wallace Roberts & Todd, LLC et al., 2002. Eastshore Park Project Preliminary General Plan. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

POPULATION AND HOUSING

City of Berkeley, The Berkeley General Plan, 2003.
Internet address: http://www.ci.berkeley.ca.us/planning/landuse/plans/generalPlan/Intro.html

PUBLIC SERVICES

City of Berkeley Fire Department.
Internet address: http://www.ci.berkeley.ca.us/fire/contact.html, search date October 2, 2003.

City of Berkeley Office of Transportation.
Internet address: http://www.ci.berkeley.ca.us/transportation/maps/emergencyevac.html, search date November 13, 2003.

City of Berkeley, Parks Division.
Internet address: http://www.ci.berkeley.ca.us/parks/parkspages/CesarChavez.html, search date November 18, 2003.

City of Berkeley Police Department.
Internet address: http://www.ci.berkeley.ca.us/police/department/beatinfo/beatmap.html, search date October, 2, 2003.
Internet address:
http://www.ci.berkeley.ca.us/police/department/specialassignments/BoatPatrol.html, search date November 7, 2003.

East Bay Regional Park District Police Department.
Internet address: http://www.ebparks.org/Police/index.htm, search date November 13, 2003.

MapQuest.®
Internet address: http://www.mapquest.com/, search date November 7, 2003.

Tong, Larry, East Bay Regional Park District, Interagency Planning Manager, personal communication, November 2003.

U.S. Coast Guard.
Internet address: http://www.uscg.mil/D11/D11Units.htm, search date November 7, 2003.

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

RECREATION

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

TRANSPORTATION/TRAFFIC

City of Berkeley, Office of Transportation.
Internet address: http://www.ci.berkeley.ca.us/transportation

UTILITIES AND SERVICE SYSTEMS

City of Berkeley, Berkeley General Plan, April 2001. Environmental Management Element.
Internet address:
http://www.ci.berkeley.ca.us/planning/landuse/plans/generalPlan/environmentalManagement

City of Berkeley, Department of Public Works - Refuse and Recycling.
Internet address: http://www.ci.berkeley.ca.us/pw/swm/swmxfer.html.

City of Berkeley, Department of Public Works - Sanitary Sewer Program and Services.
Internet address: http://www.ci.berkeley.ca.us/pw/sewers/sewcip.html.

City of Berkeley, Department of Public Works - Utility Service Information.
Internet address: http://www.ci.berkeley.ca.us/pw/Utility/utinfo.html.

City of Berkeley, Department of Public Works - Utilities, Electric Rule 16 - Service Extensions.
Internet address: http://www.ci.berkeley.ca.us/pw/Utility/ER16.html.

City of Berkeley, Map of Fiscal Year 2003 Storm Drain Sewer Projects.
Internet address: http://www.ci.berkeley.ca.us/pw/Storm/strommap.html

City of Berkeley Municipal Code, Title 17 Water and Sewers (§§17.08.010, 17.08.030, 17.08.040, 17.08.050, 17.08.060), Preservation and Restoration of Natural Watercourses.
Internet address:
http://www.ci.berkeley.ca.us/bmc/berkeley_municipal_code/title_17/16/index.html

City of Berkeley Municipal Code, Title 17 Water and Sewers (§§17.16.030, 17.16.050, 17.16.070), Sanitary Sewers--Construction Requirements for Sewers and Storm Drains.
Internet address:
http://www.ci.berkeley.ca.us/bmc/berkeley_municipal_code/title_17/16/index.html

City of Berkeley Municipal Code, Title 17 Water and Sewers (§§17.20.020, 17.20.050, 17.20.070, 17.20.100), Discharge of Non-Stormwater into the City's Storm Drain System--Reduction of Stormwater Pollution.
Internet address:
http://www.ci.berkeley.ca.us/bmc/berkeley_municipal_code/title_17/20/index.html

East Bay Municipal Utility District (EBMUD), Commercial Customer informational website.
Internet address:
http://www.ebmud.com/services/new_customers/commercial_customers/default.htm.

ESRA/FEMA Hazard Information and Awareness, Site-Specific Flood Hazard Map, Berkeley, California.
Internet address: http://www.esri.com/hazards

Pacific Gas & Electric (PG&E), New Construction Services informational website.
Internet address: http://www.pge.com/customer_service/new_construction_services.

Wallace Roberts & Todd, LLC et al., 2001. Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District, and California Coastal Conservancy.

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APPENDIX A
MAPS

APPENDIX B

VEGETATION MANAGEMENT PLAN

APPENDIX C

SPECIAL STATUS SPECIES LIST

APPENDIX D

ACRONYMS